

THESIS TITLE

Measuring emotional intelligence of managers in Singapore and the  
application of emotional intelligence for individual and organisation effectiveness.  
An exploratory study.

PLAIN ENGLISH TITLE

The emotional intelligence of managers in Singapore

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A thesis submitted in fulfilment of the  
requirements for the degree of

Doctor of Philosophy

School of Management

University of South Australia

2006

Preliminaries

Printed by Dr Mike Gosling

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DECLARATION

I declare that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge it does not contain any material previously published or written by another person except where due reference is made in the text.

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Michael Gosling

Singapore, 16 May 2006

## ACKNOWLEDGEMENTS

I acknowledge the contribution made by all respondents, managers, and senior executives who gave of their time without remuneration to participate in this project. I thank them for their openness and willingness to be involved.

I thank CPA Australia, Singapore Division, and The Chartered Management Institute, Singapore Branch, through their then respective Presidents, Mr Loh Hoon Sun and Mr Liau Beng Chye, for mailing invitations to their members on my behalf inviting them to participate in this project.

I acknowledge the early supervision, encouragement, and advice of Professor Tricia Vilkinas on this project. Associate Professor Chris Provis offered direction at a critical phase. Associate Professor Prashant Bordia has provided timely and valuable insight and support in helping me bring this project to a successful completion. I thank them all for their assistance.

Senior Lecturer Lorraine Spiers stands out as a colleague who selflessly holds the continual empowerment and development of students as her top priority. She has encouraged and motivated me through her regular visits whenever she travelled to Singapore. Her continued interest in my progress, work, and family and her sincere friendship are greatly appreciated and highly valued.

I express my appreciation to current and former University of SA and ICMOE secretariat staff, Beverley Schutt, Janet Gilboy, and Sandra Walker, and library personnel, who attended speedily to my requests for assistance. These folk lightened my life through maintaining a warm, personal, and tangible link between the university and me while I completed this thesis resident in Singapore.

I thank Dr Soh Kay Cheng, Dr Ng Aik Kwang, Dr Bruce Brown, and Ms Nie You Yan for valuable advice and assistance concerning descriptive statistics used in this thesis.

Thank you to friends and colleagues who have been with me on this journey offering perspectives and support at crucial times when I needed a boost to move me forward. I say a special thank you to Associate Professor Ian Smith, The University of Sydney, who provided mentoring and encouragement during his tenure in Singapore. Thank you to Michelle Jones-White for reading my draft.

I would like to acknowledge the support and encouragement I have received throughout the ten years of this project from my loving wife and business partner, Karen Gosling, and my two sons, Daniel and William. Thank you all so much for your love and understanding and putting up with all the stress.

Finally, I wish to thank and acknowledge Dr John (Jack) Mayer. I began my research into emotional intelligence (EI) in July 1999. I was initially drawn to Dr John (Jack) Mayer's work – with Dr Peter Salovey and Dr David Caruso – on the MSCEIT™ model of emotional intelligence, which heightened my interest and passion for the area. I could see immediately that I could apply their model in my clinical coaching and counselling practice to assist people seeking long-term positive behavioural change or having difficulty understanding their emotions. I first met Jack Mayer at the inaugural conference on 'Applying Emotional Intelligence to Business Solutions and Success', held in Toronto, Canada, in August 2001 organised by Multi-Health Services, Inc., where he was a speaker. And I was affirmed in my earlier decision to work with his model. Jack's command and profound insight of his subject was evident. He has encouraged my work enormously, providing positive feedback and generously sharing his knowledge and recent research on emotional intelligence. Jack's articles and "ability model of emotional intelligence" were my inspiration and the key theoretical resource for this project and my work, now encapsulated in *EASEQuadrant®*, Emotional Leadership Practice, and two books. Thank you, Jack.

PUBLICATIONS ARISING FROM THIS THESIS

Gosling, M & Gosling KS, 2004, *Emotional Leadership. Using emotionally intelligent behaviour to enjoy a life of EASE*, Goslings International, Singapore.

Gosling, M & Gosling KS, 2005, *Enjoy a Life of EASE*, AsiaPac Books, Singapore.

## GLOSSARY

Affective states	Denominates, generically, events experienced as feelings or emotions.
Behaviour	Any emotion, feeling, response, reaction, or action chosen by a person as an appraisal of an event.
Big Five personality factors	I. Extraversion/introversion II. Friendliness/hostility III. Conscientiousness (or Will) IV. Neuroticism/ emotional stability V. Intellect (or openness) (Digman 1990).
Cognitive-behavioural	Therapies that aim to correct faulty cognitions that generate negative emotions inappropriate to the person's actual life circumstances (Matthews, Zeidner & Roberts et al. 2002, p. 27).
Competence	A learned capability (i.e., a personal trait or set of habits) that leads to more effective or superior job performance (Goleman 1998a, p. 19, 28).
Content analysis	A method for analysing written and oral textual materials (Insch, Moore & Murphy 1997).
Descriptive statistics	Attempts to summarise and present indigestible quantities of data in a more easily understood form, including frequencies, average scores, and the extent of variability in the set (i.e., the central tendencies and dispersions of the dependent and independent variables) (Sekaran 1984, 1992, p.259).

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ECI	Emotional Competency Inventory (Boyatzis, Goleman, & Rhee 2000; Goleman 1998a; 2001b).
Emotional intelligence	The ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Mayer, & Salovey 1997).
Empathy	Empathy is the ability to see the world through another person's perspective regardless of what you think of the other person's perspective; taking an adversarial relationship and turning it into a collaborative alliance.
Employee value proposition	"You <i>can</i> win the war for talent, but first you must elevate talent management to a burning corporate priority. Then to attract and retain the people you need, you must create and perpetually refine an employee value proposition: senior management's answer to why a smart, energetic, ambitious individual would want to come and work with you rather than with the team next door (Chambers, Foulon, Handfield-Jones & Hankin, 1998, p. 46).
EQ-i	Emotional Quotient Inventory (Bar-On 1997a).
Emotions	An emotion is a feeling with a thought. From the Latin "emovere" – meaning moving, displacing. Emotions are manifest reactions to affective conditions that – due to their intensity – move us to some kind of action, response or behaviour.

Emotions are characterised by a disruption of affective balance, and can have long-term physiological effects on the body. For example; angry, humiliated, rejected, depressed, betrayed or taken-for-granted (Ekman, 1994; Goleman, 1998a; Mayer & Salovey, 1997; Shweder, 1994).

Event	Any internal or external stimuli that is appraised and generates behaviour. Internal stimuli include: thought, memory, beliefs, values, and expectations. External stimuli are those attended by the body's senses: anything we see, hear, feel, smell, or taste.
Factor (structure) analysis	For a measure to demonstrate construct validity, its factor structure should comprise the theorised number of pattern factors. For example, Mayer & Salovey's (1997) four-branch model with 12 MSCEIT subscales.
Feelings	Affective states that have a longer duration – causing less intensive experiences – with fewer physiological repercussions on the body, and lowered interference on reasoning and behaviour. For example; impatient, startled or bored (Ekman, 1994; Mayer & Salovey, 1997; Shweder, 1994).
Genos-360	A competency based 360-degree multi-rater measure of emotional intelligence designed specifically as a leadership development tool for Australian workplace applications (Palmer & Stough 2001, 2005, Swinburne University 2005).
Intelligence	The aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal with

## Preliminaries

his/her environment (Wechsler), including abstract (verbal) mechanical (visual/spatial), and social intelligences.

### Internal validity

The internal consistency of measures is indicative of the homogeneity of the items in the measure that tap the construct (Sekaran 1984, 1992, p. 174).

### Managing emotion

The ability which allows the management and regulation of emotion in oneself and others (Mayer, Salovey & Caruso 2002, p. 19)

### MSCEIT

Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer & Salovey 1997; Mayer et al. 2002).

### Perceiving emotion

The ability to recognize how you and those around you are feeling (Mayer et al. 2002, p. 19).

### Positive or negative energy states

A person will experience both positive emotions (pleasure) and negative emotions (pain) throughout their life. These two energy states have a strong impact on emotional health. We can think of positive emotions as adding energy (energising) and negative emotions as subtracting energy (draining).

### Psychometrics

Measurement of the mind and/or its constituent mental processes (Matthews et al. 2002, p. 24).

### Qualitative analysis

Examines qualitative data, is often inductive, looks for patterns or relationships, creates new concepts and theory by blending together empirical evidence and abstract concepts, and is less abstract than quantitative analysis (Neuman 1991, p. 405).

Quantitative data	In the form of text, written words, phrases, or symbols, describing or representing people, actions, and events in social life (Neuman 1991, p. 404).
Social intelligence	Concerned with people's skills in relation to one another.
SREIT	Self-report Emotional Intelligence Test (Schutte, Malouff, Hall, Haggerty, Cooper, Golden & Dornheim et al. 1998).
Star performer	In the top ten percent, however such performance is appropriately assessed (Emmerling & Goleman 2003, p. 5).
Traits	Characteristic or preferred ways of behaving (e.g., extroversion, shyness).
Talents	Nonintellectual abilities (e.g., skill at sports).
Triangulation of data	Refers to the use of a number of data collection instruments so as to get a multiple view point of the data itself. The instruments in this study include MSCEIT test scores, a research questionnaire, and executive interviews.
Understanding emotion	The ability to understand complex emotions and emotional "chains", how emotions transition from one stage to another (Mayer et al. 2002, p. 19)
Using emotion	The ability to generate emotion, and then reason with this emotion (Mayer et al. 2002, p. 19).

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### Reliability and validity:

- Reliability** Measurement accuracy – extent to which items in a test are coherently measuring the variable(s) assessed (Palmer 2003a, p. 179). Different tests of EI should be highly correlated (Matthews et al., 2002, p. 24).
- Validity** Assesses whether an instrument actually measures what it is intended to measure (Mayer et al. 2002, p. 36). A test for EI should predict criterion variables, such as real-life outcomes, believed to reflect EI, including measures of life success and satisfaction (Matthews et al. 2002, p. 24).
- Content (sampling) validity** Has to do with whether a test's items are rationally drawn from the domains that the test is supposed to cover (Mayer et al. 2002, p. 37).
- Structural (factorial) validity** Refers to how many things a test measures (Mayer et al. 2002, pp. 37-39).
- Predictive validity** Degree to which a test predicts performance or things of importance. Two types: (a) Discriminant (distinctiveness) and (b) Criterion validity (Mayer et al. 2002, pp. 35-39).
- a. Discriminant validity** Also called distinctiveness; refers to whether a test is different to those that have come before, e.g., The MSCEIT's relation to other tests . Established by showing that something does not correlate with theoretically unrelated constructs. For example, research has demonstrated moderate to strong relationships between self-report measures and

personality measures. Therefore, many self-report EI measures lack discriminant reliability from personality measures (Day & Carroll p. 1445).

b. Criterion validity

Is the test predictive of important criteria?

Construct validity

Refers to whether a test is a good operationalisation of the concept it claims to measure (Mayer et al. 2002, p.43). Established through correlations with existing measures of the same construct. For example, general mental intelligence and emotional intelligence) (Day & Carroll p. 1445).

Convergent validity

Established by showing that tests correlate highly with one another (Matthews et al. 2002, p. 79).

LIST OF ABBREVIATIONS

ASEAN	Association of South East Asian Nations
BOEI	Benchmark of Organisational Emotional Intelligence
CREIO	Consortium for Research on Emotional Intelligence in Organisations
EI	Emotional Intelligence
EQ	Emotional Quotient
EQ-i	Emotional Quotient Inventory
ECI	Emotional Competency Inventory
Genos EI	Genos EI Assessment Scale
IQ	Intelligence Quotient
MSCEIT	Mayer-Salovey-Caruso Emotional Intelligence Test
SREIT	Self-report Emotional Intelligence Test

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RESEARCH QUESTIONS

RESEARCH QUESTION	Managers' Perceptions	Executives' Perceptions
<p>1a How emotionally intelligent are managers in Singapore?</p> <p>b Is there a difference between the emotional intelligence abilities of local and Western managers in Singapore?</p>	<p>Measured by the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test</p>	
<p>2 What is the influence of emotional intelligence on organisation effectiveness in Singapore?</p>	<p><b>Questionnaire:</b> In the opinion of managers of corporations in Singapore [Appendix A5 – Research Questionnaire]</p> <p>(i) Have there been sufficient opportunities for managers to increase their emotional intelligence in the work place? [Q2]</p> <p>(ii) does emotional intelligence play a role in increasing the competence of people at all levels to enable organisations to compete in world markets? [Q3a]</p> <p>(iii) to what extent should their companies assist managers to increase their knowledge of emotional intelligence? [Q3b]</p> <p>(iv) have their companies been successful implementing emotional intelligence programmes in the work place? [Q3c]</p> <p>(v) should companies establish emotional intelligence as a corporate priority? [Q8a]</p>	<p><b>Executive interviews:</b> In the opinion of senior executives of corporations in Singapore</p> <p>(vi) is emotional intelligence established in corporate culture?</p> <p>(vii) is the emotional intelligence of managers recognised as adding economic value to their business?</p>

RESEARCH QUESTIONS	Managers' Perceptions	Executives' Perceptions
<p>3 How important do you feel emotional intelligence is in the workplace for</p> <p>a. star performance?</p>	<p><b>Questionnaire:</b> In the opinion of managers of corporations in Singapore:</p> <p>(i) Do star performers in the work place exhibit emotional intelligence? [Q4]</p> <p>(ii) Is emotional intelligence important for star performance in the workplace? [Q5]</p>	<p><b>Executive interviews:</b> In the opinion of senior executives of corporations in Singapore</p>
<p>b. selection?</p>	<p>(i) What significance do companies give to emotional intelligence in their search for talent? [Q7]</p>	<p>(ii) are managers tested for emotional intelligence in corporate staff selection, appraisal, promotion, and retention assessments?</p>
<p>c. leadership?</p>	<p>Is emotional intelligence important for leadership? [Q8d]</p>	
<p>d. team building?</p>	<p>Is emotional intelligence important for team building? [Q8d]</p>	
<p>e. appraisal?</p>	<p>Is emotional intelligence important for promotion? [Q8e]</p>	
<p>f. training?</p>	<p>(i) Should companies provide opportunities in the workplace for managers to increase their knowledge about emotional intelligence? [Q8b]</p> <p>(ii) Should companies meet the cost of training for emotional intelligence? [Q8c]</p> <p>(iii) Do managers allow staff time off to study emotional intelligence? [Q8f]</p> <p>(iv) Do managers generally show little or no interest in learning about emotional intelligence? [Q8g]</p> <p>(v) Do managers feel that emotional intelligence is a passing 'fad'? [Q8h]</p>	<p>(vi) is the development of emotional intelligence of managers a corporate priority in staff training?</p>

## ABSTRACT

### **Brief introduction**

Emotional intelligence (EI) is one element in a broad spectrum of skills that enable managers to create value for their organisation and themselves. Since Salovey and Mayer's (1990) seminal article on the concept, and its popularisation in a social science book of the same name (Gibbs 1995; Goleman 1995), emotional intelligence has emerged in several different models and measures. Matthews et al. (2002) outlined three contexts for the study of emotional intelligence: psychometric, theoretical, and applied. The focus of this study is on measurement and applied use of emotional intelligence; where the "underlying EI is the impetus to improve emotional functioning in real life" (Matthews et al. 2002, p. 27). To the author's knowledge, no independent studies have measured the emotional intelligence of managers in Singapore. Equally, little is known about the perceptions of managers and senior executives on the influence and importance of emotional intelligence in organisations in Singapore.

### **Purpose**

This thesis is an exploratory study to measure the emotional intelligence of Singaporean and international managers in Singapore using the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer, Salovey & Caruso 2002). Additionally, this thesis set out to explore what perceptions managers and senior executives in Singapore had about the influence and importance of emotional intelligence for their organisations and themselves. As this thesis argues that emotional intelligence is an essential component of emotional leadership, the precursor to effective leadership, it is important to know managers' views of how emotional intelligence influences their individual development and functional and leadership roles in the workplace. Equally, what senior executives think about emotional intelligence and its importance to star performance and creation of value is critical given that they influence significantly training and development decisions of the firm.

This thesis makes an original contribution to the literature on emotional intelligence through further quantitative measuring of emotional intelligence scores using the MSCEIT and a proposed *EASEQuadrant* model for classifying and explaining emotional intelligence scores measured by the MSCEIT. Additionally, an emotional leadership development workshop centred on *EASEQuadrant*, as one part of a broader theoretical framework of Emotional Leadership Practice (ELP), is proposed in this thesis as a program to train managers to behave with emotional intelligence.

### **Research design & data collection**

Data was collected using three instruments; (1) the online MSCEIT emotional intelligence test, (2) the research questionnaire, and (3) executive interviews. Quantitative data from the MSCEIT and questionnaire was analysed using descriptive statistics. Content analysis was used for conceptual and relational analysis of text collected in executive interviews. The proposed theoretical framework, *EASEQuadrant*, was used to classify and interpret data collected using the MSCEIT. Finally, quantitative and qualitative analysis of data has furnished conclusions for this study.

In the current study a population sample (N=86) completed the MSCEIT, a psychometric instrument constructed by Mayer and colleagues from their mental ability model of emotional intelligence (Mayer & Salovey 1997; Salovey & Mayer 1990). Significant support for the reliability and factor structure of the MSCEIT was found in the literature for this measure of emotional intelligence.

In addition, 84 respondents completed the research questionnaire and seven executive interviews were conducted with chief executive officers or senior human resource managers of companies in Singapore. The three data sets enabled a triangulation of data to draw conclusions for this thesis.

## **Summary of the results**

The study found, from results scored by the MSCEIT, that the current sample of Singapore managers had average emotional intelligence, as compared to the North American norm. There was no substantive difference in the emotional intelligence abilities of Chinese Singaporean managers and their Western counterparts. The study revealed that there is considerable room for improvement in the emotional skills of managers in Singapore. Additionally, the study found that respondents considered emotional intelligence influenced star performers but did not influence significantly organisation effectiveness. Whilst senior executives recognised the influence and importance of emotional intelligence for organisation effectiveness and individual success, they did not set emotional intelligence as a priority for employee value propositions and training.

## **Relevance**

At about the same time Sumantra Ghoshal – renowned professor of strategic leadership at the London Business School and formerly of Harvard University – was arguing that "The most important source of a nation's progress is the quality of its management" (Mann 2000, p. 23), senior government officials in Singapore began raising this very issue. The aftermath of the 1998 Asian financial crisis promoted heightened debate in the country as to the competency and necessity or otherwise of employing international managers in corporations. It was clear that research into emotional intelligence and its nexus with individual manager/leader success and organisation effectiveness was timely.

## **Implications**

This study argues for the norming of Singapore emotional intelligence scores and the implementation of the measurement, training, and development of emotional intelligence for managers in organisations in Singapore. The study suggests using an holistic approach utilising the three major models of emotional intelligence and their respective measuring tools; trait, competency, and emotional intelligence approaches.

Practical implications of this study for organisations include a more socially cohesive, motivated, emotionally healthy workforce, the retention of talent in Singapore in the global economy, and increased revenue.

A practical implication of a manager recognising and developing improved emotional skills, that is, exercising emotional leadership, is improved individual performance with inherent benefits, including improved health and well-being, status in the organisation, and financial reward.

### **Value**

The value of this research in Singapore is that at a time when government, multi-national corporations (MNCs), small and medium enterprises (SMEs), and other organisations are finding it difficult to attract and retain good people, this research provides analysis on the emotional skills of managers and perceptions of senior executives and managers on the influence and importance of emotional intelligence for organisation effectiveness and individual performance. The study provides directions for future research in establishing a national Singapore norm for emotional intelligence scores and a longitudinal study on the applied use of emotional intelligence tests. The research points to the need for organisations in Singapore to establish emotional intelligence at the forefront of their employee value proposition – why smart, energetic, and ambitious individuals would want to work for them as managers. It focuses the need for training in emotional intelligence if companies are to compete successfully in the global economy.

### **Conclusion**

Emotional intelligence was seen by the current sample of Singapore managers as influencing organisation effectiveness and important for individual performance. Yet, surprisingly, many managers in the sample were not committed to improving individual emotional intelligence. Managers suggested that their organisations did not fully support the implementation and training of emotional intelligence in the workplace. Additionally, whilst senior executives interviewed recognised the influence and importance of emotional intelligence for

## Preliminaries

organisation effectiveness and individual success, they currently have not set emotional intelligence as a priority in their employee value propositions and have not committed measurable resources to training programs in emotional intelligence.

## CHAPTER 1

### INTRODUCTION

*[Leaders we admire] all build relationships and inspire us to give our best. Even though managers can be leaders it is not their managerial talent that inspires you to think of them as leaders. Usually, it is an interpersonal skill, a behaviour that is expressed in such a way that it elicits our choice to follow, to be influenced, to admire unselfconsciously. – John Nirenberg (2003).*

Chapter one provides an introduction to the emergence of the application of emotional intelligence for organisation effectiveness and individual performance in organisations in Singapore. It introduces the concept of emotional leadership – behaving with emotional intelligence – as essential to effective leadership. The chapter sets out how this study emerged, terms used in this thesis, the aims and objectives of the study, its importance to an organisation's employee value proposition, and addresses some of the study's limitations. Finally, the chapter lists three research questions and provides an outline of the thesis.

The construct of emotional intelligence (EI) is one element in a broad spectrum of skills (behaviour) required of managers for organisation effectiveness and individual success. Emotional intelligence began to receive widespread attention after the popularisation of the concept in a social science text of the same name (Goleman 1995) and the appearance of emotional intelligence on the cover of TIME Magazine in October 1995 (Gibbs 1995). The popularisation of the concept raised several important questions for the author, living and working in Singapore: What was emotional intelligence? How was it measured? Were managers in Singapore emotionally intelligent? Could one of the reasons for attracting foreign talent to Singapore be their higher emotional intelligence? What was the influence of emotional intelligence for organisation effectiveness? If, as Ghoshal argued (Mann 2000, p. 23), it was the job of a manager to create value, how could managers acquire emotional skills as one of a broad spectrum of skills to enable them to create value for their organisation and themselves?

This thesis, therefore, sets out as an exploratory study to measure the emotional intelligence of local Singaporean and international (Western) managers as one component of several interpersonal skills required of managers, to lead and manage organisations effectively in the global economy. Additionally, this study aimed to explore the perceptions held by managers and senior level executives working in Singapore of the influence and importance of emotional intelligence for organisations.

### **1.1 Background information**

The term "emotional intelligence" has been promoted as a measurable construct quite apart from cognitive intelligence, since it was first used in scientific literature by Salovey and Mayer in 1990. It is believed emotional intelligence may explain differences in the quality of intrapersonal and interpersonal relationships and contribute to job performance and management effectiveness (Mayer, Caruso & Salovey 2000; Mayer, Salovey & Caruso 2004a) and predict success (Caruso & Salovey 2004; Goleman 1995, 1998a, 1998b, 2000a), although some dispute this (Davies, Stankov & Roberts 1998; Matthews, Roberts, & Zeidner 2004).

Since 1990, debate on the concept of emotional intelligence has centred on:

- Its emergence from personality psychology as a field of study in its own right.
- Whether emotional intelligence is intelligence at all.
- Different models of emotional intelligence.
- Argument about its measurement, reliability, and validity.
- The utility of psychometric instruments measuring emotional intelligence, and

- The potential relationship between a broad spectrum of emotionally intelligent skills (behaviours), leadership success, and organisation effectiveness.

This study measures the emotional intelligence of managers and explores the application of emotional intelligence for organisation effectiveness and individual performance in Singapore.

The opportunity to study the emotional intelligence of managers and the application of emotional intelligence in corporations in Singapore came about from the convergence of three events:

- (1) The aftermath of the 1998 Asian financial crisis promoted heightened debate in the country as to the competency and necessity or otherwise of foreign (Western) managers in corporations.
- (2) The personal realisation by the author, through his clinical experience and the popularisation of the concept of emotional intelligence (Gibbs 1995; Goleman 1995; Weisinger 1998), that people using emotional intelligence skills reported being happier and more fulfilled than previously, and
- (3) The author's success between 1999 and 2002 in applying both the ability model (Salovey & Mayer 1990) and competency model (Bar-On 1997a) of emotional intelligence in a counselling and behavioural coaching consultancy. Reporting on individual emotional intelligence scores actively assisted managers to perceive, use, understand, and manage better their emotions and the emotions of others in the context of behavioural change in leadership effectiveness (Gosling & Gosling 2004).

By 2000, emotional intelligence was receiving widespread attention in Singapore and senior government officials had begun raising the subject. Yet few people the author interviewed knew precisely what emotional intelligence was, what it entailed or how and if one should measure it. At the same time, Sumantra

## Chapter 2 – Literature Review

Ghoshal, renowned professor of strategic leadership at the London Business School, formerly of Harvard University, argued, 'The most important source of a nation's progress is the quality of its management' (Mann 2000, p. 23). Research into emotional intelligence and its nexus with individual manager/leader success and organisation effectiveness, was clearly becoming more timely.

The importance of acquiring skilled workers for Singapore to compete effectively in the new economy was emphasised by then Prime Minister – now Senior Minister – of Singapore, Mr Goh Chok Tong in his 2000 National Day Rally Speech. Singapore had weathered the Asian financial crisis – starting in Thailand in 1998 and sweeping across ASEAN countries in the years following – relatively well. In 2000, the Prime Minister was fully engaged in the drive to attract foreign talent to work in Singapore. Mr Goh announced,

The market for talent is now totally international. Employers know that their best employees may be headhunted and even move to another country, taking with them their knowledge, contacts and even colleagues. So we must take into account the competitors in the market outside, and the premium for talent in the New Economy... We will bring in foreigners and new immigrants. They will complement our needs, but they cannot replace us (Goh 2000, p. 7, 12).

This theme continued in the second volume of then Senior Minister – now Mentor Minister – of Singapore, Mr Lee Kuan Yew's memoirs, released in 2000. Mr Lee confirmed

What we [Singapore] need now is to increase the competence of our people at all levels, so we can have stronger teams for the enterprises to produce goods and services that can compete in world markets. They must be able to keep learning and retraining throughout their working lives (The Straits Times, 17 September, 2000, p. 1).

Fielding questions from Harvard Professors in the Lessons in Leadership series at Harvard University on 17 October 2000, he then revealed his thoughts on emotional intelligence by saying, 'No one can succeed or last long as a leader if he [sic] does not have a high EQ' (The Straits Times, 20 October 2000, p. 12).

Against this background, the author began his research into emotional intelligence in 1999, specifically on whether international managers – foreign

talent – in Singapore were more emotionally intelligent than Singaporean managers and, if so, could this be one of the reasons for attracting foreign talent to Singapore to help increase the competence of people at all levels, build stronger teams, and help Singapore companies compete globally? Other questions that arose in this study on the comparison of the emotional intelligence of Singaporean and international managers included:

- What insights could such a study provide in terms of a manager's individual performance and role in organisation effectiveness?
- Was emotional intelligence an important factor in the quality of management of organisations in Singapore?
- Would there be training implications for organisations to develop the emotional intelligence of their employees, strengthen their employee value propositions, and compete globally?

The author's co-published work, *Emotional Leadership. Using emotionally intelligent behaviour to enjoy a life of EASE* (Gosling & Gosling 2004), was released in October 2004. This book outlines the authors' vision of how emotional intelligence may be applied to everyday living through a theoretical framework known as *EASEQuadrant*, the model developed for this thesis. The model is central to Emotional Leadership Practice (ELP), originated by the author, and forms the structure for emotional leadership development – behaving with emotional intelligence. The author argues that emotional leadership is the purview of everyone: leader, manager, and subordinate alike. Learning and applying a sound grasp of one's emotional knowledge, emotional style, and emotional intelligence undergirds emotional leadership. Emotional leadership practice drives the behaviour of the emotionally intelligent leader. As emotional intelligence is essential to emotional leadership, the author wanted to address the measurement of emotional intelligence in managers in Singapore to discover if there were any differences between the emotional intelligence of Singaporean and international managers and report on implications from this analysis for the training of managers in emotional intelligence in Singapore.

## 1.2 The emotionally intelligent leader

Popular management and emotional intelligence texts (Covey 1989; Goleman 1995, 1998a; Caruso & Salovey 2004; Weisinger 1998) place habits, abilities, skills and competencies in the context of individual behaviour for effective living and working, be it in the workplace, home, or other social group. Specifically, emotional intelligence is one of a broad spectrum of skills, which managers have in varying levels. The promise of these texts is that they provide the *modus operandi* for human and organisational effectiveness, which ultimately is to the benefit of individuals and the corporations in which they work.

For example, Goleman championed emotional intelligence as a broadly based spectrum of skills and competencies, which managers have in varying levels writing, 'emotional intelligence is the *sine quo non* of leadership' (Goleman 1998b, p. 82).

Covey's (1989) seven habits are '... the intersection of knowledge, skill, and desire' (p. 47) and '... represent the internalisation of correct principles upon which enduring happiness and success are based' (p. 23). Covey presented an inside-out approach to leadership effectiveness that is centred on principles and character. Many of us tend to see things not as they are but as we have been conditioned to see them. Inside-out means change comes from within. Once this is accepted there is a paradigm change in the way individuals see events. And so it is with emotional intelligence; learning from the inside out.

Leadership is about building long-term feelings of trust in relationships (Mann 2003, p. 19). But leadership is not just for leaders leading at the top anymore (Chopra 2004; Goldsmith & Morgan 2004). This thesis argues that everyone who is in a relationship with someone else has a responsibility to exercise leadership in that relationship. Specifically, emotional leadership – learning emotional knowledge, understanding one's emotional style, and developing emotional intelligence – establishes long-term trust in relationships. Emotional leadership is leaders getting in touch with their own internal state and the internal state of those they lead.

Emotional leadership is inside out; learning and applying emotionally intelligent behaviours that gain long-term trust in business, professional, and social relationships (Gosling & Gosling 2004). Managers who exercise emotional leadership in whatever role they find themselves – management, administration and leadership – will be behaving as an emotionally intelligent leader.

Managers who want to be emotionally intelligent leaders have a responsibility to exercise emotional leadership in their interactions with others, assisting them in gaining emotional knowledge and nurturing emotionally intelligent behaviour. An intelligent leader can exercise emotional leadership only if he or she is emotionally intelligent – that is, has the capacity to identify, use, understand, and manage emotion (Gosling & Gosling 2004; Mayer & Salovey 1997).

This thesis examines the level of emotional intelligence of Singaporean and Western managers based in Singapore. It explores the perceptions of managers and senior executives of corporations as to the importance – or otherwise – of emotional intelligence for organisation effectiveness and individual success. This thesis proposes a theoretical model, *EASEQuadrant*, for the classification and explanation of what it means to be an emotionally intelligent manager and leader.

The context for this study focused on Singapore-based corporations that create economic value through business growth and expansion, using Mackenzie's Western business management process (Mackenzie 1969), retaining star performers who create value, as managers. The manager's task is to carry out the management process – the management, administration and leadership – of an organisation. Mackenzie (1969) wrote that leadership 'is influencing people to accomplish desired objectives' (p. 87), describing leadership as a function of management, in contrast to leadership in general. It is argued in this thesis that a manager exercising emotional leadership – that is, behaving with emotional intelligence – will increase individual performance and organisation effectiveness,

thereby improving the function of management, raising the economic value of the firm.

Sumantra Ghoshal said, 'Management's job is value creation' (Mann 2000, p. 23). Managers and senior executives of organisations, whether in situational, functional, and general leadership roles, have a responsibility to influence others effectively – by example and persuasion – to achieve their vision. This thesis argues that managers influence others best through acting with emotional intelligence in relationships. Emotionally intelligent leaders use emotional intelligence skills in relationships to underpin individual performance and organisation effectiveness, thereby creating value for the organisation and themselves.

### 1.3 Definition of terms

Emotional intelligence (EI): 'The subset of social intelligence that involves the ability to monitor one's own feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action' (Salovey & Mayer, 1990 p. 189).

Mixed-model of EI Models which describe a self-perceived compound conception of intelligence that includes mental abilities, and other dispositions and traits (Bar-On 1997a; Goleman 1998a; Palmer 2003a). Tested by self-report instruments.

Major proponent: Dr Reuven Bar-On (Bar-On 1997a, b; 2000).

Competency model of EI Performance-based models that recognise behavioural manifestations of underlying neurological circuitry that primarily links the

limbic areas for emotion, centring on the amygdala and its extended networks throughout the brain, to areas in the prefrontal cortex, the brain's executive centre (Goleman, 2001b, p. 3). Tested by informant 360-degree feedback.

Major proponent: Dr Daniel Goleman (1995, 1998a, 2001b).

Mental ability model of EI Performance-based models that focus on the interplay of emotion and intelligence as traditionally defined (Brackett & Mayer 2003; Mayer, Salovey & Caruso 2000a). Mayer, Caruso & Salovey (2000) argued that this model measures 'a set of abilities, an actual intelligence' (p. 336). Testing of EI is by asking an individual to solve problems. Mayer and colleagues believe, 'Ability testing is the gold standard in intelligence research because intelligence corresponds to actual capacity to perform well at mental tasks, not just one's beliefs about those capacities' (Mayer, Caruso & Salovey, 2000, p. 325).

Major proponents: Dr John (Jack) Mayer, Dr Peter Salovey, and Dr David Caruso (Mayer & Salovey 1997; Salovey & Mayer 1990; Mayer, Salovey & Caruso 2000a, 2002b).

Organisation effectiveness This study argues that organisation effectiveness is enhanced through organisations implementing and promoting emotional intelligence training and application in the workplace. Ashforth &

Humphrey (1995, p. 119) emphasised the 'functional complementarity' of combining emotion and cognition through organisations embracing personal engagement (emotion) along with the rationality, the traditional 'dominate administrative paradigm'. Mayer et al. (2004a) argued for developing the emotional intelligence of individuals in the work place, and thereby the organisation as a whole. Matthews et al. (2002) argue, 'emotions may influence work-related cognitive and motivational processes, which, in turn, affect task and social behaviour, and performance outcomes' (p. 468).

#### Individual success

This study argues that individual success is dependent upon managers taking action to apply emotional intelligence for star performance. Ghoshal (Mann 2000) said of successful individuals, 'Those who take action all have a picture in their head' (p. 20). Goleman (2000b) defined star performance as 'the natural consequence of developing and using certain emotion competencies and skills' (p. 17). The HayGroup (2005), with which Goleman is associated, promoted emotional intelligence for star performance: 'Emotional intelligence is twice as important as IQ plus technical skills. Emotional intelligence is more than 85 percent of what sets star performers from the average'.

Management	'Management's job is value creation' – Sumantra Ghoshal (Mann 2000, p. 23).
Leadership	'Leadership is about a long-term feeling of trust' – Sir Paul Judge (Mann 2003, p. 19).
Emotional leadership	'Learning and applying emotionally intelligent behaviour to build a long-term feeling of trust in your business, professional, and social relationships' (Gosling & Gosling 2004, p. 289).

#### **1.4 Aim of thesis**

This dissertation focused on the measurement and applied use of emotional intelligence in Singapore. Since the construct of emotional intelligence was first formalised by Salovey and Mayer in 1990, several models have been constructed (Mayer et al. 2000a) and tangible evidence is emerging that emotional intelligence will 'be an important predictor of significant outcomes ... at school, home, and work' (Mayer, Salovey, Caruso, & Sitarenios 2001, p. 240). The aim of this thesis was:

1. To measure the emotional intelligence mental abilities of Singaporean and international managers in Singapore.
2. Examine the importance of emotional intelligence for individual performance and organisation effectiveness, as perceived by managers and senior executives in corporations in Singapore.
3. Indicate directions for future research in emotional intelligence in Singapore.

### **1.5 Objectives**

The objectives of this research were to:

1. Use the online MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer et al. 2002b) to measure the emotional intelligence of Singaporean and international managers in Singapore and establish a theoretical model for classifying and interpreting MSCEIT scores.
2. Examine data compiled from questionnaires completed by managers as well as the insights from executive interviews with senior corporate executives in Singapore. Exploring their views as to the influence of emotional intelligence in their organisations and the importance of emotional intelligence for star performance, staff selection, leadership, teambuilding, appraisal, and staff training within corporations based in Singapore.

To this end, online emotional intelligence tests, questionnaires, and executive interviews were completed in Singapore between July 2000 and August 2004. The goal of this research was to determine the level of emotional intelligence of managers in Singapore, thereby gaining an understanding of the perceptions of managers and senior executives about emotional intelligence. This provided a basis for more comprehensive studies of this construct – including a national norm of scores – in Singapore.

### **1.6 Why this research is important**

The value of this research in Singapore is that at a time when government, multi-national corporations (MNCs), small and medium enterprises (SMEs), and other organisations are finding it difficult to attract and retain good people, this research meets the need for analysis on the emotional abilities and skills levels of Singaporean and international managers in Singapore, offering direction for future

training and development in emotional intelligence. It points to the need for organisations in Singapore to establish emotional intelligence at the forefront of their employee value proposition. This quantifies why smart, energetic, and ambitious individuals would want to work as managers for these organisations.

### **1.7 Limitations**

There are a number of limitations to be taken into consideration when interpreting the results of this study and addressed by future projects that seek to replicate this research.

The first limitation concerns the method of administration of the MSCEIT tests. In the current study, respondents were provided the Internet website and login details and asked to complete the test in their own time. As such, the conditions under which the test was completed were not controlled, so it is not known if conditions were always optimal for test taking of this nature. For example, was it a suitable time of day? Was the respondent located in a quiet setting with limited distractions? Was the respondent free from source of bias? Was the test completed independently? And was it completed in one sitting without technological interruptions? It is not known if all tests were completed on the first attempt and within the time limits set by the publishers. It may have been preferable for respondents to complete the test in group sessions, where the best test conditions could have been assured and supervision provided.

Second, the study was limited to the MSCEIT – a performance-based measure of emotional intelligence mental abilities – of which the author was accredited to administer a research version. While the literature pointed to argument for limitations of psychometric tools, such as the MSCEIT, for measuring emotional intelligence (Day & Carroll 2004; Davies et al. 1998; Fineman 2004; Matthews et al. 2002; Palmer, Gignac, Manocha & Stough 2005; Roberts, Zeidner & Matthews 2001), there is considerable support for its validity and reliability as a measure of emotional intelligence mental abilities (Brackett &

Mayer 2003; Mayer et al. 2004a; Mayer et al. 2001; Palmer et al. 2002; Van Rooy & Viswesvaran, 2004).

Third, the response rate of 8.8 percent of respondents (N=139) and sample size (N=86) of completed MSCEIT tests. As such, the findings concerning implications for the general population of managers as a whole in Singapore should be interpreted with caution. Future studies should seek to obtain a higher response rate and sample size to facilitate more conclusive research findings in regard to the general population.

Being an exploratory study, it was determined by the author that the MSCEIT would meet the aims of the research. That is, it would measure the emotional intelligence mental abilities of Singaporean and international managers in Singapore. Future studies may include testing of emotional intelligence with additional psychometric instruments, such as the Genos EI (Genos 2005). Such a longitudinal study is proposed by this thesis in chapter six (section 5.6.2).

## **1.8 Research questions**

This project considered three research questions:

1. How emotionally intelligent *are* managers in Singapore? Is there a difference between the emotional intelligence abilities of local (Singaporean Citizen and Permanent Resident) and Western managers?
2. What is the influence of emotional intelligence on organisation effectiveness in Singapore?
3. How important do managers and senior executives feel emotional intelligence is in the workplace for star performance, selection, leadership, teambuilding, appraisal and training?

### **1.9 Outline of thesis**

Chapter two presents a summary of the literature on emotional intelligence. Outlining the conception of emotional intelligence from emotion and intelligence, and the development of various approaches and instruments for measuring emotional intelligence. The chapter discusses research findings to-date, its limitations, and directions for future research. The literature outlines three contexts for the study of emotional intelligence: psychometric, theoretical and applied. This review focuses on literature from scientific and management areas, relating to the application of emotional intelligence.

Chapter three provides a description of the materials, scoring methods, reliability and data sets, supporting the results (chapter four) of this study. Details of the project questionnaire, external online emotional intelligence test (MSCEIT), and executive interview structure used for data collection and analysis are discussed. The rationale, development, and utility of *EASEQuadrant* is reported. Data sets and analysis are described.

Chapter four presents quantitative analysis and interpretation of data completed by 139 adult respondents for this project using descriptive statistics, content analysis, and thematic analysis. *EASEQuadrant* profiles classifying and interpreting emotional intelligence scores measured by the MSCEIT are discussed. A comparison of the sample means and standard deviations with North American norms is conducted as a prelude to an argument for establishing Singapore national norms for emotional intelligence tests measured using the MSCEIT.

Chapter five provides an explanation of the results and examines the relationships between emotional intelligence, its measurement, influence in the workplace, and importance for individual performance.

Chapter six presents conclusions for this thesis, its strengths and limitations, directions for future research and practical implications, including a case study.

## Chapter 2 – Literature Review

The literature on emotional intelligence points to vigorous debate on its final form, but also a growing body of scientific evidence to support the assertion that emotional intelligence can be applied by individuals in the work place, home, and community leading to happier, healthier, and more productive lives. It is to the review of this literature that this thesis now turns.

## CHAPTER 2:

### LITERATURE REVIEW

*The term emotional intelligence conveys some aspects of present-day zeitgeists; it captures something of the many competing interests or spirits of our age (Mayer, Salovey & Caruso 2000b, p. 97).*

Chapter two defines and places emotional intelligence in its context – a part of the biological sciences, or human characteristics, setting people apart from one another, for success. And yet, the zeitgeist value of emotional intelligence was that it was egalitarian – for anyone could learn it (Mayer, et al. 2000b). But is this popular concept of emotional intelligence supported by scientific enquiry? The chapter presents a brief overview of the emergence of emotional intelligence as a field of study in its own right. It also outlines a growing body of scientific evidence supporting the assertion that emotional intelligence can be learned and applied by individual managers in the workplace, enabling organisation effectiveness and predicting individual success.

Psychologists Dr John Mayer, of the University of New Hampshire, and Dr Peter Salovey, of Yale University, first published two scientific articles on emotional intelligence in 1990. The literature on emotional intelligence derives largely from these two articles in the research area of scientific psychology; specifically the areas of personality psychology and social intelligence (Brackett & Mayer 2003; Mayer 2000b; Mayer & Salovey 1997; Mayer et al. 2000a; Mayer et al. 2001; Salovey & Mayer 1990). Available literature on the topic since 1990, discusses the conception, measurement, models, and utility of emotional intelligence, including vigorous debate as to whether emotional intelligence is intelligence at all (Davies et al. 1998; Emmerling & Goleman 2003; Mayer & Salovey 1993; Mayer & Salovey 1997; Palmer et al. 2005; Roberts et al. 2001;

Salovey & Mayer 1990). The final form of emotional intelligence – perhaps as the best predictor of success in life (Freedman 2005) – was yet to emerge. The history of the field was still being written (Caruso 2005).

Since the popularisation of the concept of emotional intelligence in a social science book of the same name (Goleman 1995), the appearance of emotional intelligence on the cover of TIME Magazine (Gibbs 1995), and the Mayer and Salovey (1997) article, "What is emotional intelligence?", a lot has been written on the subject in the psychology, social science, neuropsychology, and management disciplines. Despite this, a clearly identified construct of emotional intelligence had not been identified and there was no consensual definition of the term "emotional intelligence" (Davies et al. 1998; Matthews et al. 2004; Palmer, Gardiner & Stough 2003b), but work on identifying this construct has begun (Bar-On & Parker 2000). Several authors have since constructed further models of emotional intelligence.

Table 2.1 presents a brief summary of the models of emotional intelligence identified by authors in the field. The entries have been organised by year of publication and principal author surnames.

The development of the conception of emotional intelligence emotional quotient (EQ) began in 1980, in an unpublished PhD thesis by Bar-On (1997a). His clinical experience as a psychologist in the early 1980's emphasised the need to answer two questions: 'Why do some people have better psychological well-being than others?' and 'Why are some individuals more able to succeed in life than others?' (p. 1). Bar-On's (1997a) approach to EQ was multifactorial, grouping 15 proposed components under five composite scale scores (pp. 17-21) – see Appendix F for a summary of the factorial components of Bar-On's concept of emotional intelligence.

In 1990, Salovey & Mayer defined emotional intelligence as

the subset of social intelligence that involves the ability to monitor one's own feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action (Salovey & Mayer 1990, p. 189).

Following these findings, other authors produced various models of emotional intelligence, including:

- An emotional competence model later adjusted to a five-dimension model with 20 competencies in four clusters of general emotional intelligence abilities (Goleman 1998a, pp. 32-34, summarised at <[www.managers.org.uk/institute/](http://www.managers.org.uk/institute/)>; Goleman 2001a,b).
- A construct of emotional intelligence that encompassed a set of conceptually related psychological processes involving the processing of affective information (Davies et al. 1998, p. 990).
- A model that identified seven constituents of emotional intelligence, which broke down into three main categories (Dulewicz & Higgs, 2000, 2003; Dulewicz, Higgs & Slaski 2003; Higgs & Aitken 2003, summary viewed 5 May 2005 at <[www.managers.org.uk/institute/](http://www.managers.org.uk/institute/)>; Higgs & Dulewicz 1999).
- Taxonomy for emotional intelligence and a 360 multi-rater emotional intelligence test developed specifically for the workforce in Australia; the SUEIT: Swinburne Emotional Intelligence Test (Palmer 2003a; Palmer & Stough 2001, 2005; Swinburne University of Technology 2005). This test is now established commercially as the Genos EI Assessment Scale (Genos 2005). The authors of this model believed that a five-factor model best represents the communality amongst the various measures of emotional intelligence assessed (Palmer 2003a, p. 176).

Table 2.1 – Summary of models of emotional intelligence

Bar-On (1997a)	Salovey & Mayer (1990); Mayer & Salovey(1997)	Goleman (1998a)
<p>Bar-On's approach to EQ was multifactorial, grouping 15 proposed components under five composite scale scores (Appendix F):</p> <ol style="list-style-type: none"> <li>1. Intrapersonal</li> <li>2. Interpersonal</li> <li>3. Adaptability</li> <li>4. Stress management</li> <li>5. General mood</li> </ol>	<p>Proposed a four-branch model of emotional intelligence – later revised (1997) – involving:</p> <ol style="list-style-type: none"> <li>1. The ability to perceive emotion accurately.</li> <li>2. The ability to appraise and express emotion.</li> <li>3. The ability to understand emotion and emotional knowledge.</li> <li>4. The ability to regulate emotions to promote emotional and intellectual growth.</li> </ol>	<p>Popularised the concept of emotional competencies:</p> <ol style="list-style-type: none"> <li>1. Self-awareness – understanding yourself, your strengths and weaknesses and how you appear to others.</li> <li>2. Self-regulation – the ability to control yourself and think before you act.</li> <li>3. Motivation – the drive to work and succeed.</li> <li>4. Empathy – understanding other people's viewpoints.</li> <li>5. Social skills – communicating and relating to others.</li> </ol>

*table continues*

Table 2.1 – Summary of models of emotional intelligence

Goleman (2001a,b)	Davies, Stankov & Roberts (1998)	Higgs & Dulewicz (1999)
<p>Goleman later adjusted his five-dimension model to what he called 20 competencies in four clusters of general emotional intelligence abilities:</p> <ol style="list-style-type: none"> <li>1. Self-awareness (3 competencies).</li> <li>2. Self-management (6 competencies).</li> <li>3. Social awareness (3 competencies).</li> <li>4. Relationship management (8 competencies).</li> </ol>	<p>Proposed the construct of emotional intelligence encompasses a set of conceptually related psychological processes involving the processing of affective information. These processes included:</p> <ol style="list-style-type: none"> <li>1. The verbal and nonverbal appraisal and expression of emotion in oneself and in others</li> <li>2. The regulation of emotion in oneself and others</li> <li>3. The use of emotion to facilitate thought</li> </ol>	<p>Identified 7 constituents of emotional intelligence, in three main categories:</p> <ol style="list-style-type: none"> <li>1. The drivers – motivation and decisiveness. These characteristics energise and drive people towards their goals.</li> <li>2. The 'constrainers' – conscientiousness and integrity, emotional resilience; acting as controls and curbs to the excesses of the drivers.</li> <li>3. The enablers – sensitivity, influence and self-awareness. These facilitate performance and help the individual to succeed.</li> </ol>

*table continues*

Table 2.1 – Summary of models of emotional intelligence

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Palmer & Stough 2001

Proposed a taxonomy for emotional intelligence and developed a 360 multi-rater emotional intelligence test; the SUEIT: Swinburne Emotional Intelligence Test, now established commercially as the Genos EI Assessment Scale. Genos EI is based on five competencies:

1. Emotional recognition and expression
2. Understanding others' emotions
3. Emotions direct cognition
4. Emotional management
5. Emotional control

*Note.* Information in this table is necessarily succinct. Readers are encouraged to consult the original source for specific details.

On one hand, writers from a scientific perspective concerned themselves with the argument of whether emotional intelligence can rightly be known as

"intelligence". Were there quantitative criteria for testing its reliability and validity? And what was the relationship between the neocortical and subcortical brain regions – combining affective and cognitive areas of personality? How did they work together to create emotional abilities? (Bar-On & Parker 2000; Ciarrochi, Chan, Caputi & Roberts 2001; Davies et al. 1998; Goleman 1995, 2005; Matthews et al. 2002; Palmer 2003a.)

But on the other hand – as scientific argument over the definition and validity of emotional intelligence proceeded – psychology and management writers, practitioners, and consultants exploited the application of emotional intelligence in the workplace, advocating and using measurement tools for predicting important outcomes for management and business. (Ashkanasy & Daus 2002; Bar-On 1997a; Caruso & Salovey 2004; Cherniss & Adler 2000; Cherniss & Goleman 2001; Cooper & Sawaf 1997; Feldman 1999; Genos 2005; Goleman 1998a, 1998b, 2000a, b, 2001a, b; Hay Group 1999a, b, 2005; Jordan, Ashkanasy & Hartel 2002; Mayer, Salovey & Caruso 1999; Stein & Book 2000; Weisinger 1998.)

Matthews et al. (2002, pp. 23-29) outlined three contexts for the study of emotional intelligence: psychometric, theoretical, and applied. Whilst scientific literature on the conceptualisation, measurement, reliability, and validity of emotional intelligence – that is, the psychometric and theoretical contexts – is relevant to this study, it is not the focus. The focus of this review is the discovery of literature pointing to the need for additional studies on the measurement, utility, and influence of emotional intelligence for organisation effectiveness and individual success – the applied context of emotional intelligence, where emotional intelligence is the underlying stimulus for elevating emotional functioning in real life, stimulating an individual's ability and competency to work successfully in an organisation for the organisation's performance as a whole.

Therefore, this study does not seek to integrate disparate voluminous psychometric and theoretical research literature that may inform or provide:

## Chapter 2 – Literature Review

- A quantitative study of the construct of emotional intelligence, its measurement, factor structure and validity;
- Detailed quantitative comparisons of various models of emotional intelligence; or
- Academic debate as to what final form emotional intelligence may be.

This study argues emotional intelligence as one means of predicting important outcomes in organisations and performance in individuals (Goleman 2001b; Jordan et al. 2002; Mayer 2005; Palmer 2003). The results of this study add to literature written on emotional intelligence, providing quantitative and qualitative data to support the premise stated above. With this understanding, it was sufficient for this study to review literature which:

1. Charted the emergence of emotional intelligence from aspects of personality and social intelligence, supporting the argument that 'thinking and emotions are inextricably linked' (Caruso & Salovey 2004, p. xx).
2. Pointed to the utility of the model used in this analysis to measure emotional intelligence – namely the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer et al. 1999; Mayer et al. 2002b).
3. Explored literature on the influence of emotional intelligence for organisation effectiveness and individual success.

This literature review proceeded under the following topics:

- 2.1 Emotion, intelligence, and emotional intelligence.
- 2.2 Models of emotional intelligence.
- 2.3 Measuring emotional intelligence.
- 2.4 Emotional intelligence, organisation effectiveness and individual success.

2.5 Directions for future research.

2.6 Research questions.

## **2.1 Emotion, intelligence and emotional intelligence**

*The study of emotional intelligence emerged, in part, from the research area of cognition and affect – an area that was concerned with how emotion changed thought, and vice versa (Mayer 2000b, p. 411).*

This section reviews several competing concepts of emotional intelligence, beginning with discussion on what is meant by emotion, intelligence and emotional intelligence.

The emergence of emotional intelligence is a field of study in its own right; the growing personal importance of managing one's emotions and improved knowledge and study of emotion, intelligence and the relation of emotion to cognition, and personality traits (Roberts et al. 2001). As the field developed and became popular, writers began exploring the influence of emotional intelligence on leadership, career, management and team development. It seemed emotional intelligence could enhance workplace outcomes.

A summary of literature on the concept, nature and models of emotional intelligence can be found at [www.unh.edu/emotional\\_intelligence](http://www.unh.edu/emotional_intelligence) and [www.eiconsortium.org](http://www.eiconsortium.org). An account of traditional definitions and views of emotion, a guiding framework for the contributions of emotion to personality psychology, an account of historical literature on intelligence and the emergence of the study of emotional intelligence, and discussion on whether emotional intelligence is intelligence or is best called intelligence at all, has already been provided (Mayer 2000b; Mayer & Salovey 1993, 1997; Mayer, Salovey, & Caruso 2000a, 2004a; Salovey & Mayer 1990).

### 2.1.1 Traditional view of emotion in relation to cognition

*Rule your feelings, lest your feelings rule you* (Publilius Syrus, First century BC, cited in Salovey & Mayer, 1990).

Emotional intelligence emerged from the field of personality (see Digman 1990 and Mayer 1998 for details of personality structure/framework) to be studied in its own right (Mayer 2000b & 2001a; Salovey, Bedell, Detweiler, & Mayer 2000) as '... the capacity to reason about emotions, and as the capacity of emotion to enhance thought' (Mayer et al. 2002b, p. 6). The relationship between intellect and emotion traditionally was viewed as one involving a conflict between two psychological forces; emotion and thought (Matthews et al. 2002; Mayer, DiPaolo, & Salovey 1990; Salovey, Woolery, & Mayer 2001).

We have learned the human body is programmed to perceive change in the internal and external environment – the face being the primary signal system to show emotion (Ekman 1992; Ekman & Davidson 1994). Emotional change embraces change in personality, and personality characteristics such as empathy, warmth, social skills, motivation and persistence are influenced by the adaptive nature of emotional expression – changing your personality from within (Goleman 1995). Emotional intelligence thus represents abilities to solve emotional problems having an impact on personality.

For example, Mayer et al. (1990) found that the ability to draw emotional information from faces, colours, and even abstract designs, was related to empathy. The authors concluded aspects of emotional intelligence appeared to be abilities which could be measured as tasks, and that qualities – such as empathy – involved well-defined skills that could be assessed and improved. 'Such work may enable the emotionally unintelligent person...to become more emotionally pleasing to those around them' (p. 779).

Therefore it was worth examining the components of personality – motivation, emotion and cognition – and their combination in relation to the emergence of emotional intelligence (see Mayer 2000b & 2001a for an explanation of the 'Trilogy of mind': emotion, cognition, and conation or

motivation). This section reviews one essential element of personality – emotion and its contribution to emotional intelligence.

Winefield & Peay (1980/1991) likened Freud's psychodynamic approach to personality as a three-part iceberg, most of which remains unconscious. The id seeks immediate satisfaction and is guided only by the pleasure principle. The mainly conscious ego mediates between the id and the demands of both society and of conscience. The ego operates more on reality, is rational, can delay gratification, and seeks safety. The superego or conscience, partly conscious and partly unconscious, is a watchful and critical moralist, which strives for perfection. The necessary conflict between these elements of personality, and how it is resolved, is seen as the source of personality.

Freud's approach to personality became the traditional theory of psychoanalysis for dealing with emotional management (Beck 1976; Ellis 1962/1994). This thesis will argue for concepts of emotional intelligence centred on the interaction between emotion and cognition as sources of personality that emphasise the functionality and adaptability of emotions rather than the pathological approach adopted by Freud in his "three-part iceberg" model Winefield & Peay (1980/1991).

Mayer & Salovey (1993) argued that traditionally, emotional management was mostly thought of as serving the purpose of diminishing our emotional experience. Mayer (1999b) suggested that Freud believed that without psychotherapy people could not improve their mental health. Indeed, emotional management – under the Freudian cognitive concept – was promulgated through defence (coping) mechanisms used by a person's personality to cope. Defence mechanisms included (adapted from Gosling & Gosling 2004, pp. 181-183; Mayer & Mitchell 1998; Mayer & Salovey 1995; Winefield & Peay 1980/1991, p. 141):

- **Denial** – The short-lived capacity to be selectively inattentive to external threats. Anxiety-provoking impulses or memories may be

repressed, sparing the ego from dealing with guilt or threat.

Example: Refusing to accept the reality of a life-threatening illness.

- **Objective rationality** – Everything is rationalised. Intellectualisation or rationalisation that may cut a person off from reality to an artificial and damaging extent. Example: A man believes his marriage is 'fine'. 'I know what to do,' he says. Meanwhile, his marriage is falling down around him.
- **Projection** – Unrealistic attribution of your feelings onto someone else. For example, projecting anger onto others. We see in others a feeling we are really feeling ourselves. Conversely, we can see in others what we fail to see in ourselves. Example: You are feeling quiet and awkward in room crowded with people you don't know, and you ask someone, 'You're really quiet. Are you tense about something?'
- **Displacement** – Choosing an inappropriate – rather than an appropriate – expression for an unacceptable arousal (overreaction). Example: You may be really angry about your workload, or feel overlooked because something you have submitted to your boss has not been considered. So you target the boss, 'He's a pig!'

Freud – and those who followed him – made explicit several characteristics of human mental life (Winefield & Peay 1980/1991, p.141):

- a) Personality is the result of past experience – rather than predominantly of chance or inheritance.
- b) Behaviour is not always rational in the face of anxiety. Except when defending against the anxiety from a major need - in this circumstance it is rational.
- c) The mechanisms by which we protect ourselves from anxiety can buy time and permit the development of better solutions; they can help us

to cope. Or they can – if allowed to dominate behaviour – lead to maladaptive patterns that may need expert help to 'unlearn'.

At a time when health was defined in functional terms as the absence of disease and illness simply a matter of bodily disorder (Winefield & Peay 1980/1991, p. 1), negative emotions were related to illness or disease. Freud's concept of defence mechanisms emphasised interactions between emotion and thought, but with a distinct emphasis on the pathological (Mayer 2000b, p. 412).

Gosling & Gosling (2004) pointed out that attachment by many people to defence mechanisms is based on fear and insecurity. Typically, when faced with internal events (thoughts, beliefs, values, memory, and expectations) and/or external events (those activated by the senses), most people relied on defence mechanisms to deal with negative emotions, as they did not know their true self – their identity. Conditioned by a pathological approach to understanding emotion, most people have a lowered awareness of the physiological impact of emotion on the body. Paradoxically, a search for security is fruitless, as attachment to what is known (memory) and what may be (fantasy) generates negative emotion (stress). Insecurity or uncertainty requires stepping into reality – into the present moment – where emotions are experienced fully, without conditioning. This, they argued, was behaving with emotional intelligence.

Mayer et al. (2000a) believed '...emotions and reasoning sometimes have been viewed in opposition to one another' (p. 399). The belief was that emotions were chaotic and harmful to logical thought, getting in the way of rational decision-making. Researchers (Ekman & Davidson 1994; Mayer et al. 1990; Mayer & Salovey 1990; Salovey et al. 2000) provided views of emotion in relation to cognition in the sequence of how emotional intelligence rose from a large body of literature to be a field of research on its own, summarised below as: (1) Traditional views of emotions, and (2) A paradigm shift occurred from 1940.

1. Traditional views of emotions were that:

## Chapter 2 – Literature Review

- Reason was superior to emotion (Quoting Ancient Greek Stoic idea reported in Mayer et al. 2004a, p. 198).
  - Passion and reason are opposites.
  - Emotions are chaotic and immature.
  - Emotions get in the way of rational decision-making.
  - '[Emotions caused] a complete loss of cerebral control [and contain] no trace of conscious purpose.' (Quoting Young, PT 1936)
2. A paradigm shift occurred from 1940; emotions were now seen to be functional and adaptive – not chaotic:
- '[Emotions] arouse, sustain, and direct activity.' (Quoting Leeper, RW 1948)
  - Intelligence is 'the aggregate or global capacity of the individual to act purposely, to think rationally, and to deal effectively with his [sic] environment.' (Quoting Wechsler, D 1958)
  - Emotions arouse our thinking and motivate us.
  - 'Emotions are adaptive, functional, and organising of cognitive activities and subsequent behaviour.' (Quoting Salovey, P 2001)
  - 'The emotions are of quite extraordinary importance in the total economy of living organisms and do not deserve being put into opposition with "intelligence". The emotions are, it seems, themselves a high order of intelligence.' (Quoting Mowrer, OH 1960)

The contemporary view is that emotions convey information about relationships (Cobb & Mayer 2000; Mayer, Salovey & Caruso 2000a; Mayer & Salovey 2003; Mayer & Salovey 1997; Salovey & Mayer 1990). Each emotion signals a different relation. An emotionally intelligent person has a firm grip on how to behave – either intrapersonally or interpersonally – when he or she *doesn't*

know what to do (Gosling & Gosling 2004). Mayer and Beltz (1998) also determined that a thorough thinking through of emotions on the part of the individual may be an important source of coping.

Mayer and Salovey (1993) summarised the contemporary view that emotions direct our attention to stimuli in need of processing. Similarly, Paul Ekman (1994) – Professor of Psychology and distinguished author on emotions – argued that emotions evolved for their adaptive value in managing fundamental life tasks. Averill (1994) agreed that an emotion may be vital to survival of the species whether in a social, biological, or psychological context. Additionally, Mayer et al. (2000a) suggested that emotions signal relationships between a person and a friend, a family, the situation, a society, and internally between a person and his or her memory.

Emotional intelligence, and its link to the evolution of the functional use of emotions, has been around since Charles Darwin wrote – in *The Expression Of The Emotions In Man And Animals* (1872/1998) – about the functional purpose of emotions. Darwin believed emotions ensured survival by energising required behaviour and also signalled valued information (Salovey et al. 2000, p. 505). 'Darwin demonstrated that emotional expression plays a major role in adaptive behaviour, which remains an important axiom of EI (emotional intelligence) to the present day' (Bar-On 2001, p. 83). Researching emotion has given us the idea that emotions signal meaning about individual and social needs; for example, the need for survival, love and affection. 'Emotional intelligence refers in part to an ability to recognise the meanings of such emotional patterns and to reason and solve problems on the basis of them' (Mayer et al. 2000a, p. 400).

Learning how emotions were generated, how they signalled an individual's level of need, how one understood, managed and discriminated amongst emotions, and how emotions were signals about a person's changing relationships – previously the purview of social intelligence – became integral to the conceptualisation of emotional intelligence (Bar-On 2001, Brackett & Mayer 2003; Mayer 2000b; Mayer

& Salovey 1993; Mayer et al. 2004a; Salovey & Mayer 1990; Weisinger 1998).

Salovey et al. (2000, p. 505), believed contemporary psychology had moved away from the view that reason is superior to emotion, toward an emphasis on the functionality of emotions. Salovey and Mayer's (1990) central theme of emotional intelligence was that emotions were functional and adaptive. They saw emotions as organised responses, crossing the boundaries of many psychological subsystems, including the physiological, cognitive, motivational, and experiential systems. Emotions, they argued, typically arose in response to an internal or external event that generated positive or negative meaning for the individual. Emotions were adaptive and could potentially lead to a transformation of personal and social interaction into enriching experience.

Mayer's (2000b) research revealed

As research on emotions and thought moved from an emphasis on psychopathology to everyday moods and thoughts, the idea that emotions might be adaptive for thought coexisted with the idea that they caused bias' (Mayer 2000b, p. 412).

Mayer commented that although most psychologists viewed demonstrations of emotional influence as evidence of bias and distortion, others were beginning to focus on functional rather than dysfunctional relationships between emotion and cognition. An outcome of this development, argued Mayer, was the concept of emotional intelligence – 'the idea that emotions and intelligence can combine to perform more sophisticated information processing than either is capable of alone' (Mayer 2000b, p. 412).

Summarising the components of personality, Mayer et al. (2000a) considered that emotions, along with motivation and cognition, formed three fundamental classes of mental operations, also called enabling mechanisms. Among the trinity of motivation, emotion, and cognition, basic motivations arose in response to internal bodily states. Emotions signalled and responded to changes in relationships between a person and the environment. Emotions responded to external changes in relationships (or internal perceptions of them). Cognition

allowed an individual to learn from the environment and to solve problems in new situations.

These authors also argued that these three fundamental classes of mental operations – motivation, emotion and cognition – (Mayer & Mitchell 1998; Mayer et al. 2000a,b) possessed intrapersonal and interpersonal qualities, forming general personality. 'The term *emotional intelligence*, then, implies something having to do with the intersection of emotion and cognition' (p. 398). Mayer and Salovey (1995, p. 205) had earlier argued it made sense to apply the concept of intelligence to emotion. They researched the qualities people possessed and utilised in the construction and regulation of emotion, depending upon their level of consciousness. They then classified these qualities in three levels:

- Emotional orientation (unconscious) – a person's basic adaptational learning of emotion.
- Emotional involvement (low level consciousness) – a person's openness to emotion and skilfulness at framing situations so that the right emotions emerge.
- Emotional expertise (high level of consciousness) – a person's expert knowledge about feelings and their regulation.

Several authors described the link between motivation, emotion and cognition, felt as physiological arousal in the body (Ekman 1994; Gosling & Gosling 2004; Ledoux 1994a; Mayer 1998; Shweder 1994; Weisinger 1998; Winefield & Peay 1980/1991). Arguing that the source of autonomic arousal was appraisal, Winefield and Peay (1980/1991) held that a person's attribution of meaning to a situation was largely a product of learning. Appraisal, or perception, was essential to nervous arousal.

In the period 1980 to 1991, prior to much of the work on emotional intelligence, Winefield and Peay (1980/1991) wrote an explanation of the relationship of neural pathways, emotion, and cognition. This bio-psycho-social

model of emotional experience helps us understand the antecedents for emotional intelligence.

Conversely, Matthews and Zeidner (2000), whilst agreeing that coping with stressors is central to any construct of emotional intelligence, argued against the idea that developing emotional intelligence would mitigate against the physiological effects of stressors. 'There is little evidence from research on stress to suggest that individuals without major problems in living can be differentiated on an emotional intelligence continuum' (p. 483).

Nevertheless, consensus emerged amongst writers in the field on the combined influence of emotion and cognition in relation to emotional intelligence. For example, Bar-On, Tranel, Denburg and Bechara (2003) posited that deficits in emotional signalling were sure to lead to poor judgement in decision-making – especially in the personal and social areas. In a study on whether emotional and social intelligence is different from cognitive intelligence, the authors found that the major difference between the emotion and cognition components of intelligence is that cognitive intelligence is more dependent on cortical structures that support logical reasoning, whereas emotional and social intelligence is more dependent on limbic and related neural systems that support the processing of emotions and feelings.

Gorman (2002), in an article in TIME magazine describing the biology of anxiety, revealed most people are clueless about what they are feeling. She reported on neuroscientific studies conducted with rats, which identified that two neural pathways activated in response to a stressor, such as an electric shock. One pathway is direct from sensory organs to the amygdala, activating the 'fight' or 'flight' response. The other neural pathway is long, circuitous route through the cortex, where the brain does its most elaborate and accurate processing of information. In relating this research on rats to humans, Gorman argued that the amygdala – in conjunction with other parts of the limbic system, namely, the thalamus and hippocampus – liaised with the prefrontal cortex to process and moderate the physiological effect of emotion felt in the human body. Ledoux

(1994a) believed the amygdala to be an essential structure in the brain system involved in the formation of memories about the emotional significance of stimuli. The memory capacity of the hippocampus leaves emotional memory formation intact, while projections to the cortex from the amygdala could serve as channels through which emotional processing can influence cognitive processing.

In discussing the neurological layers of emotional intelligence, Goleman (2001b, p. 3) argued, that emotional intelligence encompassed the behavioural manifestations of underlying neurological circuitry that linked the activities of limbic areas for emotion, centering on the amygdala and its extended networks throughout the (human) brain, to areas in the prefrontal cortex. This circuitry, he believed, was essential for the development of skills in each of his four competency domains of emotional intelligence.

Mayer, Salovey and Caruso (2004b) summarised their meaning of emotions in relation to cognition as:

- a. Each kind of emotion (anger, fear, etc.) shares certain essential features that are biologically based.
- b. Simpler emotions may combine to form more complex emotions.
- c. Emotions may be regulated but not fundamentally altered by display rules.
- d. Emotions have the functional purpose of signaling relationships and change in relationships, real or imagined, principally between people and their environments (including other people).
- e. Emotions and cognitions represent different functions of the mind, if not the brain, recognising the two often interact and are expressed in an integrated form.

Emotions govern, and often signal, motivated responses to situations (Mayer et al. 2004a, p. 198). Gosling & Gosling (2004) believed that emotional constipation – emotional distress (negative emotion or stress) – was 'dis-ease', an

illness of how you think. You are what you think. How you feel depends on how you think. Changing the way you think puts *you* in control of your response to events – not the other way around. By understanding the link between EAR – Event (internal or external stimuli, motivation), Appraisal (cognition), and Response (emotion and/or chosen behaviour) – individuals could intervene cognitively to mitigate the effect of negative emotion (stress) felt in their body. (Beck 1976, 1991, 1993; Ellis 1962/1994, 1985, 2003; Seligman 1992, 1995). The idea that you are what you think and how you feel depends upon how you think is supported also in positive psychology, which is about strengths of character and positive experiences that make life worth living (Cloud 2006; Hayes 2005; Park, Peterson & Seligman 2004; Seligman & Csikszentmihalyi 2000; Seligman, Steen, Park & Peterson 2005).

Ellis (1985) claimed to be one of the early theorists on the primacy of cognition in the creation of emotional disturbance, the ability to command emotion: 'Cognition [is] a prime factor not merely in the creation of emotion in general but as an exceptionally vital factor in the instigation, maintenance, and alleviation of what we often call emotional "disturbance"' (p. 471). The author's term, "emotional constipation", which derives from Ellis' term "emotional disturbance", refers to negative responses – negative emotion (stress) or dis-ease – felt in the body as physiological arousal caused by negative appraisal of events occurring in life, mediated by the brain (Goleman 2001b; Ledoux 1994a; Matthew, et al. 2002; Mayer & Salovey 1993). Neurologically, cognitive and emotion systems that underpin these interactions that cause nervous arousal are highly integrated (Damasio 1994).

Beck (1991) found that negative automatic thoughts, a form of internal communication system shaped by beliefs of patients, predisposed individuals to develop anxiety disorders. He reported that a study of clinical data identified four emotions from cognitive structuring: Sadness from the perception of loss, elation from gain, and anxiety and anger from threats. However, Beck (1991) argued that cognition (automatic thoughts) alone did not cause depression:

Cognition as a singular noun refers to various processes in cognitive or information processing: perception, interpretation, recall, and, as such, comprises a component of a circular model. Each of the psychological systems (cognition, affection, motivation) is interconnected so that changes in one system may produce changes in other systems (Beck 1991, p. 371).

Beck (1993) repeated his earlier assertion that a system of psychotherapy 'should include "a tenable theory of personality and of the process of change"' (p. 194).

Wessler (1992) likens Ellis and Beck to Watzlawick (1990), an acknowledged constructivist:

Ellis and Beck paraphrase a familiar line from Epictetus (who might be called the patron philosopher of constructivists): 'People are not disturbed by events, but by the views and opinions they have of those events.' Subjective meanings (that is, inferences and appraisals) rather than objective events are responsible for emotional and behavioural responses (Wessler, 1992, p. 622).

On the relationship between cognition and emotion, Lazarus (1984), who like Ellis (1985) believed in the primacy of cognition over emotion, argued against Zajonc (1984), who maintained the primacy of emotion:

... emotion reflects a constantly changing person – environment relationship ... Cognitive activity is a necessary precondition of emotion because to experience an emotion, people must comprehend...that their well-being is implicated in a transaction, for better or worse (Lazarus 1984, p. 124).

While Zajonc (1984) holds that Lazarus 'obliterates all distinction between cognition, sensation, and perception' (p. 117), Lazarus (1984) counters that he does not ignore the distinction, simply believes that 'sensory preferences and aesthetic appreciation...often, though not always, fall under a different rubric' (p. 126). Lazarus (1984) points out that his differences with Zajonc are philosophical, he is a constructivist, while Zajonc could be regarded as a neo-positivist, and concedes that proof for either position is currently not available.

Constructivists hold that humans construct subjective meaning – a private reality – and that objective reality is unknowable if it exists at all. Rationalists

emphasise accuracy of perception (Ellis 1992, p. 620-622). Neo-positivists argue that the only authentic knowledge is scientific knowledge which must be tested empirically (Ellis 2003, p. 234).

The author's view is in line with that of Ellis and Lazarus, that how you feel depends on how you think and agrees with Lazarus (1984) that 'Although I maintain that cognition (of meaning) is a necessary precondition for emotion, this does not imply that emotions, once elicited, do not affect cognition' (p. 126). Indeed, as will be shown in this thesis, this is an essential criterion of emotional intelligence, that emotions can inform our thinking (Mayer et al. 2004a, p. 197).

In developing his theory of Rational Emotive Behaviour Therapy (REBT), Ellis reaffirmed his belief that thinking, emotion, and action were linked and overlap,

Rational Emotive Behaviour Therapy (REBT) assumes that human thinking, emotion, and action are not really separate or disparate processes but that they all significantly overlap and are rarely experienced in a pure state. Much of what we call emotion is nothing more nor less than a certain kind—a biased, prejudiced, or strongly evaluative kind—of thought. But emotions and behaviors significantly influence and affect thinking, just as thinking significantly influences what we call emotions and behaviors (Ellis 2003, p. 221).

Ellis argued for openness and flexibility in thinking to inform emotional health:

REBT always was opposed to any kind of absolutism and is now more strongly opposed to this view. It holds that dogmatic, rigid, and absolutist thinking is one of the main essences of human neurosis and that openness, flexibility, and acceptance of human diversity is one of the main essences of nondisturbance (Ellis 2003, p. 234).

At the core of Ellis' REBT is the A-B-C theory of personality (Ellis 2003, p. 241). The A stand for an activating event, for instance by some type of challenging life situation. B is the evaluation (cognitive-affective-behavioural) of the activating event – people's irrational beliefs, causing an emotional consequence, represented by the C.

Ellis pointed out that

Humans, unlike just about all the other animals on earth, create fairly sophisticated languages that not only enable them to think about their feeling, and their actions, and the results they get from doing and not doing certain things, but they also are able to think about their thinking and even think about thinking about their thinking (Ellis 2003, p. 220.)

Behaviourists, including Edward C Tolman, believed that behaviour was a response to stimuli in the environment and could be learned or conditioned which could be used to draw conclusions about mental states or cognition. Tolman argued that rats constructed maps of mazes they learned even in the absence of reward, and that the connection between stimulus and response (S->R) was mediated by a third term – the organism (S->O->R) (Tolman 1948, p. 192).

O'Keefe & Nadel (1978) argued that 'there exists at least one neural system which provides the basis for an integrated model of the environment' (p. 1). They called this 'system which generates this absolute space a *cognitive map* and ... identify it with the hippocampus' (p. 2), that part of the limbic system of the brain with a central role in the formation of memories (pp. 380-381). O'Keefe & Nadel (1978, p. 51) state that the term "cognitive map" was first used by Tolman (1948), who 'proposed that rats form *cognitive maps* of their environment' (p. 192). O'Keefe & Nadel (1978) assert 'that the hippocampus acts as a cognitive mapping system' (p. 90) 'assumed to have two basic components: a mapping space and a locative mechanism for building and changing maps' (p. 102). Here, "cognition" can be used to refer to the mental models, or belief systems, that people use to perceive events, construe a situation, simplify, and make sense of otherwise complex problems (Beck 1995). The cognitive mapping system could also 'function as a deep structure for language ... long-term, context-specific memory for episodes and narratives' (O'Keefe & Nadel 1978, pp. 409-410).

Neuro linguistic programming (NLP) is a communication model developed by Bandler and Grinder (1975, 1976) that links our thoughts and speech (including internal dialogue) to the actions we take subsequently. NLP also offers considerable knowledge about cognitive mapping or patterns of interacting, the application of language to change thinking and thus alter mood and emotion. Gumm, Walker & Day (1982) state:

A basic assumption of the [NLP] model is that human experience is encoded in an individualized series of representational systems that correspond to the sensory systems one uses to make contact with the world, principally, the visual, auditory, and kinaesthetic modalities (Gumm, et al. 1982, p. 327).

Studies (Gumm, et al. 1982; Einspruch & Forman 1985; Krugman, Kirsch, Wickless, Milling, Golicz & Toth 1985) question the empirical support for counselling interventions based on principles of NLP and the veracity of the theory of NLP. Nevertheless, neuro linguistic programming spawned a massive self-development industry where people are encouraged to recognise their own thinking patterns, challenge their speech patterns, asked to set goals which can be turned into outcomes, and reflect on how they feel when they reach those goals. Adherents are asked to model what went right in their life, those internal processes and communication styles that achieve excellence, and duplicate the same capability for success found in others. Any beliefs that limit a person from changing should be re-evaluated in the context of what is learned.

Rational-Emotive Therapy (Ellis 1993a, p. 200) theorises also that people tend to become habituated to their disturbed thoughts, feelings, and actions and easily and automatically keep repeating them, even when they 'know' they bring about poor results. To change, they therefore often have to force themselves, quite uncomfortably, to push themselves to break their dysfunctional habits. Rational-Emotive Therapy, which was renamed by Ellis (1999) to Rational Emotive Behavior Therapy (REBT), holds

that people are constructivists and partly choose to have their own disturbed and non-disturbed thoughts, feelings, and behaviour...REBT active-directively teaches clients how to choose more functional solutions to their lives (Ellis, Shaughnessy & Mahan 2002, pp. 357-358).

Rational Emotive Behavior Therapy (Ellis, 1962/1994, 2003), cognitive therapy (Beck 1976), and cognitive-behavior therapy (Meichenbaum 1977) are forms of psychotherapy, which help people 'to feel better, get better, and stay better' (Ellis et al. 2002, p. 362). On psychotherapy, Ellis said

All three processes – cognition, emotion, and behaviour – interact to create human disturbances. Therefore, clients had better change their self-

defeating thinking but do so emotionally and behaviourally. They had better change their feelings, but work at them cognitively and behaviourally (Ellis, et al. 2002, p. 357).

Key concepts in cognitive-behavioural therapy are

[1] The cognitive component in the cognitive-behavioural psychotherapies refers to how people think about and create meaning about situations, symptoms and events in their lives and develop beliefs about themselves, others and the world... [2] The behavioural component ... refers to the way in which people respond when distressed. Importantly the cognitive and behavioural psychotherapies aim to directly target distressing symptoms, reduce distress, reevaluate thinking and promote helpful behavioural responses by offering problem-focussed skills-based treatment interventions (Grazebrook, Garland & the Board of BABCP 2005, p. 4).

In an article looking at the applicability of REBT for executive coaching to help a client identify a set of goals and improve performance, Sherin & Caiger (2004), argued that REBT could be used to meet a number of coaching goals identified by Kilburg (1996), including behavioural changes leading to improved flexibility and effectiveness, increased social and psychological awareness, developing emotional responses, and ability to deal with stress. Sherin & Caiger concluded that REBT

has the potential to challenge clients' core assumptions and provide them with a concrete system that will allow them to evaluate their maladaptive expectations and responses on an ongoing and, ultimately, an independent basis (Sherin & Caiger 2004, p. 231).

The study of positive psychology (Seligman & Csikszentmihalyi, 2000) is about '...what work settings support the greatest satisfaction among workers..., and how people's lives can be most worth living' (p. 5). Seligman & Csikszentmihalyi (2000) argued that developing positive psychological skills moves the focus of psychology from a 'preoccupation only with repairing the worst things in life', that is, a focus on pathology or the 'disease model of human functioning', to 'also building positive qualities' (p. 5). 'Positive psychology is an umbrella term for the study of positive emotions, positive character traits, and enabling institutions' (Seligman, et al. 2005, p. 410). In setting out 24 strengths of character as positive traits, Seligman, et. al (2005) seek to 'enable human thriving' (pp. 411-412) and 'increase individual happiness' (p. 413). In this context, positive

psychology aims to establish the causal efficacy of happiness in its three forms: '(a) positive emotion and pleasure (the pleasant life); (b) engagement (the engaged life); and (c) meaning (the meaningful life)' and that happiness interventions influence mood states (Seligman 2002; cited in Seligman et al. 2005, p. 413-414).

Positive psychology interventions that build happiness and the focus on positive emotion differ from Mayer & Salovey's (1997) emotional intelligence mental ability model in that they are behaviour-based and use self-report assessment tools. It may be that positive emotions, positive character traits, and positive institutions are similar to or the same as emotional intelligence competencies (Bar-On 1998; Goleman 1998a, b; Palmer 2002). For example, Park et al. (2004) list "self-regulation" and "social intelligence" as two "character strengths" in their Values in Action (VIA) Classification of Strengths table as

Self-regulation [self-control]: Regulating what one feels and does; being disciplined; controlling one's appetites and emotions.

Social intelligence [emotional intelligence, personal intelligence]: Being aware of the motives and feelings of other people and oneself; knowing what to do to fit in to different social situations; knowing what makes other people tick (Park et al., 2004, p. 606).

Third-wave psychologists (who followed the first wave Freudian model of psychodynamic therapy and second wave cognitive – behaviour therapies) 'teach mindfulness, the meditation-inspired practice of observing thoughts without getting entangled with them' (Cloud 2006, p. 2). This is against the long-term strategy of second-wavers practising cognitive therapy, which is 'to attack and ultimately change negative thoughts and beliefs rather than accept them ... [and] develop new, more realistic beliefs' (Cloud 2006, p. 2). Quoting Steven Hayes, whom Cloud (2006) denotes as 'the most divisive and ambitious of the third-wave psychologists' (p. 2), argued that if we are willing to feel and can accept the negative emotion in our lives and not look for and repair cognitions that cause them, we can find acceptance and change the world. Hayes' Acceptance and Commitment Therapy (ACT) (Hayes 2005) is 'conceptualized as a positive psychological skill, not merely a method of avoiding psychopathology' (Hayes 2005, p.1). The focus of ACT is thus on 'reducing the impact of thoughts

regardless of their content' (Cloud 2006, p. 7). The core concept of ACT, according to Hayes (2005) 'is that psychological suffering is usually caused by the interface between human language and cognition, and the control of human behaviour by direct experience' (p. 1).

In developing a systems framework for the field of personality, Mayer (1998) pointed out that 'many textbooks redefined psychology as the study of behaviour, rather than the mind' (p. 139). His purpose was to remind us that

the purpose of (many) personality scales is to measure internal processes, not behaviour. Such scales record how the self conceives of its own urges, feelings, thoughts, and consciousness (Mayer 1998, p. 139).

Mayer (1998) argues that 'personality is a system and its elements must be evaluated in interaction with one another' (p. 141). To the extent that they have evolved from the one system, learned optimism (Seligman, 1992) and emotional intelligence abilities (Mayer & Salovey, 1997) inform each other, and can be evaluated in interaction with one another.

As mentioned earlier in this thesis, Mayer & Salovey's (1997) concept of emotional intelligence connects affect (emotion) and cognition (thought) of the three-part division of the mind. The third sphere of personality, motivation (or conation), 'refers to biological urges or learned goal-seeking behaviour' (Mayer & Salovey 1997, p. 4), and includes the concepts of learned optimism (Seligman 1992) and character strengths and virtues (CSV) (Seligman et al. 2005). The author submits that learned optimism and emotional intelligence abilities are not the same but inform each other in the overall study of individual personality.

'Emotions exist in the context of other personal characteristics and interpersonal relationships' (Mayer & Salovey 1997, p. 21). Seligman's concepts of learned optimism and CSV exist in the context of emotional intelligence and are related to it. These concepts focus on motivational characteristics or traits personality factors – that is, 'biological urges or learned goal-seeking behaviour' (Mayer & Salovey 1997, p. 4) – rather than on emotion or intelligence. In the author's view, Seligman's concepts relate more to Goleman's third definition of

emotional intelligence being 'character' (1995b, p. 285) than to Mayer & Salovey's (1997) definition of emotional intelligence as a mental ability and relate to but do not stand in place of emotional intelligence mental abilities; which combines the ideas that 'emotion makes thinking more intelligent and that one thinks intelligently about emotions' (Mayer & Salovey, 1997, p. 5). For example, optimism influences organisational effectiveness, life criteria and training can increase it (Seligman, 1992). However, Mayer (1998) suggests 'unthinking optimism may seem of value, but may result in low emotional intelligence' (p. 141).

'Emotional intelligence...encourages a process of personal investigation that can occur in the context of the person's own politics, ethnicity, religion, and other characteristics' (Mayer & Salovey 1997, p. 16). Building on emotional intelligence constructs and cognitive behaviour insights, the author's new theory of ELP – Emotional leadership Practice – detailed in chapter 3.7.2, enhances our learning of emotional language and understanding of emotional style, and provides a framework for the development of emotional intelligence. Empirical longitudinal research is required to demonstrate the efficacy of this program, which should include comparisons of cognitive – behaviour theories, neuro linguistic programming, positive psychology, and emotional intelligence and a review of cultural considerations in the Singapore context.

The interplay of emotion in relation to cognition also necessarily involves cultural considerations. Emotions seem to be universal across cultures (Ekman & Davidson, 1994). Yet 'culture and/or religious observances further define expected emotions' (Mayer & Salovey 1997, p. 20) and 'individuals from different subcultures approach emotions differently' (Mayer & Salovey 1997, p. 21). For example, Bass (1997) believed that performing better than one's team members may be acceptable in Western societies but be a cause for disharmony and loss of face in Japan. Ultimately, 'differences in cultural beliefs, values, and norms moderate leader-follower relations' (Bass, 1997, p. 137). For example, Bass (1997) argued that 'In the collectivistic societies of Asia, more directiveness would be expected of its transformational leaders' (p. 136).

In a study on trait emotional intelligence and happiness, Furnham & Petrides (2003) found that the amount of variance in happiness was related to self-perception and dispositions, like, 'emotion regulation, relationship skills, and social competence'. Schimmack, Radhakrishnan, Oishi, Dzokoto & Ahadi (2002) cautioned that the strength of this relationship could vary across cultures.

Differences in national culture – patterns of thinking, feeling, and acting that differentiate one country from another – continued to exist despite globalisation (Hofstede, Van Deussen, Mueller & Charles, 2002). Culture is defined as the 'patterns of values, attitudes, and beliefs that affect the behaviour of peoples within a region' (Hofstede and Ronen and Shenkar, cited in Shipper, Kincaid, Rotondo & Hoffman IV, 2003, p. 175). The implication that emotions can and should be discussed is not transferable to all cultures.

Hofstede & Bond (1998) identified that cultures differ mainly along five dimensions: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, and Long Term Orientation. 'At the company level, differences among cultures in these four dimensions have many consequences for management practices' (p. 14). Two examples: (1) In Chinese culture, the Confucian teaching of family harmony is found in the maintenance of an individual's "face", that is, you give others "face" so as to preserve their dignity, self-respect, and prestige (Hofstede & Bond, 1988). (2) In cultures such as Malaysia and Singapore, which are high Power Distance cultures, 'self-awareness of controlling skills may be crucial relative to effectiveness' (Shipper, et al., 2003, p. 187). A limitation of Hofstede & Bond (1988) and Shipper, et al's (2003) work is that both studies were done in a single different multinational company. A limitation in this study is the absence of a detailed analysis of the cultural preference of managers in Singapore who participated.

In a further study (Garret, Buisson & Yap, 2006) the five Hofstede & Bond (1988) dimensions, were considered in relation to marketing and research and development integration mechanisms utilised in New Zealand (Western) and Singapore (Eastern) cultures. The study found that 'national cultural differences

do need to be considered before mechanisms being implemented in another national environment' (Garret, et al. 2003, p. 305). In a study on cross-cultural and social diversity of postpartum depression in a wide range of countries, including Singapore, it was found that symptoms, complaints, and syndromes may vary across cultures (Halbreich & Karkun 2006). Chan, Lai, Ko & Boey (2000) considered work stress among six professional groups in Singapore and found two major sources of work stress: performance pressure and work-family conflicts. These sources of work stress were said to arise from the value of competition and performance instilled in workers and the Chinese cultural value of interpersonal harmony, respectively. Leung & Bozionelos (2003) found, in a study on the five-factor model of personality in the Confucian culture, that 'the trait of openness is of different value in the anglo-Saxon and in the Confucian society as leader emergence is concerned' (p. 67). Finally, Herkenhoff (2004) argued that culturally tuned emotional intelligence can better support leadership and organisational effectiveness.

Summarising, any instrument that attempts to measure the emotional intelligence of managers in Singapore needs to account for cultural differences and establish a Singapore national norm for comparison purposes. This is a limitation of this study. In addition, cognitive – behaviour theories, neuro linguistic programming, positive psychology, character strengths, mindfulness, acceptance and commitment therapy, learned optimism, and cultural considerations inform the traditional view of emotion in relation to cognition and seem relevant to emotional intelligence. Additional comparisons and potential linkages between these theories and emotional intelligence are beyond the scope of this thesis, but do raise interesting issues for future research.

These interactions between emotion and thought, previously considered pathological – that is, dysfunctional, following Freud – were now seen as functional and physiological. Mayer suggested,

One outcome of this development was the concept of emotional intelligence – the idea that emotions and intelligence can combine to

perform more sophisticated information processing than either is capable of alone (Mayer 2000b, p. 421).

It seemed increasing one's emotional knowledge – informed and learned through the testing, learning, and knowing one's level of emotional intelligence, emotional style, and possibly mood regulation (Mayer & Gaschke 1988) – would enhance one's relationships in the home, community and workplace.

It became clear that developing emotional knowledge was essential to developing emotional intelligence (Gosling & Gosling 2004; Weisinger 1998). Emotions: (1) Gave one feedback and helped one survive; (2) Connected and bonded one with other people in relationships; and (3) Caused one to act with altruism and to self-actualise – to fulfil one's life potential.

Emotions represented bodily feelings experienced as arousal of the nervous system (Winefield & Peay 1980/1991, pp. 107-114). Stress involved an emotional reaction, especially a reaction involving negative emotions (Bar-On, Brown, Kirkcaldy and Thomé 2000, p. 1108). No one else can experience your feelings in the same way that you do. An implication of this fact is you have to be responsible for your feelings. They are not happening to anyone else (Ekman 1994; Ledoux 1994a; Weisinger 1998). No one can make you angry except yourself. Emotions are generated to signal a need. But how were emotion states generated?

Ledoux (1994a) pointed out that research began around the mid-20<sup>th</sup> century on the neural basis of stimulus perception. Research since then has provided arguments for and against what comes first – a feeling or a thought. Mayer (2000b) revealed Robert Zajonc (1980, 1984) had argued that 'feelings were more important than cognition in determining attitudes' (p. 411). Chopra seemed to share this view. In an address on 'The Soul of Leadership', Global Brand Forum, Singapore, December 2003, he said,

What we know from neurophysiology is that you cannot influence your limbic brain through your cortical brain. You cannot, for example, convince yourself to have ethical behaviour. You cannot convince yourself rationally, that morality is the right thing to do. You cannot command

through your emotions...because emotions have their own rules. Human beings are ruled more by emotions than anything else (Chopra 2004, p. 21).

Chopra went on to elaborate on his concept of synchronicity – all behaviour is a function of consciousness and inner transformation leading to the spontaneous right act, spontaneous right ethic, and spontaneous right morality.

Ledoux (1994a) argued that thalamic sensory processing areas were the gateway to the neocortex and amygdala, where emotional significance is attached to sensory signals. The activation by the thalamus of the amygdala and the cortex almost simultaneously may account for why we are not aware of why we respond emotionally, the way we do. To the extent he believed that specific response strategies were developed to cope with emotional stimulus and became an initial or immediate reaction – that is, a reaction perfected through evolutionary experience – this reaction would be automatic. The secondary reaction – that is, a reaction specific to the individual, reflecting past experience, judgment, and prediction – would be voluntary (Ledoux 1994b). Ellesworth (1994) countered with the view that emotion is usually provoked by appraisals (including remembered appraisals) of the environment, and ourselves in relation to our environment. While Izard (1994) believed there were four types of information-processing or emotion-activating systems: two non-cognitive – cellular and organismic – and two cognitive – biopsychological and cognitive. She argued both non-cognitive and cognitive process activate emotion, yet indicated there was a need for some conceptual distinctions between such seemingly different processes as those that occur in genes, and those that require complex neural networks in the brain.

Researchers recognised the minimum for cognitive-activated emotion as appraisal. Ekman (1994) held that the appraisal mechanism operated rapidly, but was not always automatic – as when there is a slow, deliberate and conscious evaluation of the event that triggered the emotion state. In discussing appraisal Ekman suggested that automatic appraisal did not simply and solely operate on what was given biologically, dealing only with stimulus events that exactly fitted

what was given. He indicated that individual differences in our experience allowed for enormous variations in what generated emotion, such as personality, family, and culture. Because emotions can occur with a very rapid onset, through automatic appraisal we often experienced emotions as happening to us, rather than chosen by us. We do not simply decide when to have a particular emotion. Ekman believed that an automatic involuntary aspect was present in the experience of all emotion.

The cognitive process of appraising stimuli (stressors, events) (Beck 1976; Ellis 1962/1994), facilitated through neural processing – the sensory/amygdala/thalamus/hippocampus/cortex circuitry in the brain – was emotion and intelligence at work; an individual's perception of how he or she knows the world (Ledoux 1994a). Shweder (1994, p. 39) wrote that emotion states represent affective experience

...not simply as a feeling – as tiredness or tension or a heartache, but as a perception (for example, betrayal by trusted allies), and a plan (for example, retaliation, realignment, withdrawal, and so forth) (Shweder 1994, p. 39).

Meanwhile, Salovey and Mayer believed perception was a central part of emotional intelligence (1990). And Winefield and Peay (1980/1991, p. 53) described perception as a process by which information about the outside world impinged on the sensory organs, was decoded and interpreted by the brain, and resulted in a conscious experience. Perception, they believed, was one aspect of cognition – mental activities that enabled you to know and make decisions about the world.

This review of literature on emotion – as it related to the physiological impact of emotion on cognitive appraisal (intelligence), cognitive-emotional interactions in the brain, whether people are responsible for their emotions or emotional behaviour or whether emotions produce involuntary behaviour, and the impact of emotion on emotional intelligence – showed emotion was *integral* to the construct of emotional intelligence. Emotion informed and influenced intelligence. It seemed possible that you could command through your emotions;

thought came before feeling. The author's concept of EAR – Identity (Beck 1976; Ellis 1962/1994; Gosling & Gosling 2004, pp. 100-102) carries this idea further, that a person can influence their behaviour cognitively through developing their emotional intelligence in a framework of emotional leadership practice (chapter 3.7.1)

The next part of this review considers the discovery of literature relating the second essential component of emotional intelligence – intelligence.

### 2.1.2 Intelligence

*Personality traits such as extraversion involve dispositions toward behaviour; intelligence involves organismic abilities to behave (Mayer & Salovey 1993, pp. 434-435).*

Intelligence has a core meaning in the sciences. It implies

...gathering information, learning about that information, and reasoning with it – they all imply a mental ability associated with the cognitive operations (Mayer et al. 2000a, p.398).

Mayer and Geher (1996) described three classes of intelligence:

1. The abstract, analytical, and/or verbal intelligences.
2. The mechanical, performance, visual-spatial and/or synthetic intelligences.
3. The less-studied class of social and/or practical intelligences.

Cognitive intelligence – measured as IQ (Intelligence Quotient) – was determined to do with one's cognitive capacity to:

- Be analytical and logical in thinking (problem solve).
- Remember and recall information (memory).
- Compute accurately (mathematics).
- Have a general fund of information (day-to-day link).

A high IQ is a human characteristic valued by almost everyone. And it was once thought having a high IQ was all one needed to be successful and fulfil one's potential (Lemann 1999). Achieving a high grade in a test, or having the ability to do well academically, is important. However, John Holt (1964) believed the true test of intelligence was not how much you know how to do, but how you behaved when you didn't know what to do. The author submits that emotionally intelligent people know how to behave when they *don't* know what to do.

Today the reliability and validity of IQ tests are not beyond question (Mayer et al. 2000a, p. 399). Testers can never be sure about the test-retest reliability, as health or familiarity with the test may influence relative performance, and validity may be compromised if the test does not measure what it is intended to measure (Winefield & Peay 1980/1991, p. 118). There is a tendency to test the critical components of skills – such as competency levels – in questions. These at best are indicators of something deeper and more important. We now know qualities such as perseverance, self-discipline, achievement and emotional abilities, are more important than having a high IQ (Caruso & Salovey 2004; Goleman, 1998a, b; Gowing, 2001; Mayer, 2005). Ultimately, emotional health is dependent upon having a firm grip on how you behave when you *don't* know what to do, how you use your emotional abilities – emotional intelligence – in various situations.

Mayer et al. (2000a) suggested one alternative to dealing with IQ's limited predictive ability was to redefine intelligence as a combination of mental ability and non-intellective personality traits. Earlier, Bar-On (1997a) suggested the genesis of emotional intelligence had its roots in 'non-intellective aspects of general intelligence'. Quoting Wechsler (1958), Bar-On (1997b) described general intelligence as, 'The aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his (or her) environment.' (p. 1) Quoting Kaplan & Sadock (1991) Bar-On then defined cognitive intelligence, generally measured by the 'IQ' (or intelligence quotient), as 'The capacity to understand, learn, recall, think rationally, solve problems, and apply what one has learned' (p. 2).

Bar-On (1997b) emphasised that emotional intelligence grew out of the non-intellective aspects of general intelligence (competencies), calling his construct EQ – *Emotional Quotient*. Following Wechsler, Bar-On believed

Intelligence describes an aggregate of abilities, competencies, and skills that represent a collection of knowledge used to cope with life effectively ... The adjective emotional is employed to emphasise that this specific type of intelligence differs from cognitive intelligence (Bar-On 1997b, p. 3).

On the other hand, other authors chose to call their construct emotional intelligence, rather than emotional competence, to link their mental ability model to an historical literature on intelligence (Mayer & Salovey 1993, p. 433). Pérez, Petrides & Furnham (2005) believed that emotional intelligence could be traced to Thorndike's (1920) social intelligence, a construct to understand and manage people in relationships. These authors saw Gardner's (1983) work on multiple intelligences, specifically his ideas of interpersonal and intrapersonal intelligence, as the nearest roots of emotional intelligence.

Quoting Thorndike & Stein (1937) Mayer and Salovey (1993) contended

Social intelligence was defined initially as the ability to understand and manage people...Because social intelligence can be applied inward, social intelligence includes the ability to understand and manage oneself (p. 435).

Mayer and Salovey (1993) believed their concept of emotional intelligence overlapped with Gardner's (1983) intrapersonal intelligence, writing,

The core capacity at work here is access to one's own feeling life – one's range of affects or emotions: the capacity instantly to effect discriminations among these feelings and, eventually, to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behaviour. In its most primitive form, the intrapersonal intelligence amounts to little more than the capacity to distinguish a feeling of pleasure from pain ... At its most advanced level, intrapersonal knowledge allows one to detect and symbolize complex and highly differentiated sets of feelings ... to attain a deep knowledge of ... feeling life (Mayer & Salovey 1993, p. 433-434).

Mayer and Salovey developed further Thorndike's and Gardner's concepts of social intelligence and personal intelligence respectively, to inform their

concept of emotional intelligence (Mayer & Geher 1996; Mayer & Salovey 1993; Salovey & Mayer 1990). They asserted the distinction between general personality – character, traits or competencies – and intelligence was that personality traits such as extraversion involved inclinations toward behaviour, whilst intelligence involved human abilities to behave. They argued that a trait such as extraversion, which may depend on social skill or result in it, was a behavioural preference rather than ability. A mental ability on the other hand was knowing what another person feels (Mayer & Salovey 1993, p. 435).

Mayer et al. (1990, p. 779) also argued emotional intelligence should be classified as a type of intelligence – a broad set of abilities that can be measured through the use of tasks. Mayer et al. (2000a, p. 399) then emphasised that mental abilities were unrelated to – that is, uncorrelated to – other personality traits, arguing that whilst some models of emotional intelligence defined emotional intelligence as a mixture of abilities and other personality dispositions and traits, the motivation for this appeared to be the desire to label as a single entity what appeared to be, in fact, a diverse group of things that predict success. They distinguished between ability models of emotional intelligence as traditionally defined, and mixed models, held to comprise mental abilities along with other dispositions and traits.

In an attempt to differentiate the Mayer & Salovey (1997) construct of emotional intelligence from other concepts that were evolving, Mayer and Geher (1996) appealed for the distinguishing of social intelligence from other intelligences by subdividing portions of it into emotional and motivational intelligences. But then Mayer, Salovey and Caruso's mental ability model was challenged by Cherniss (2001). He argued that all definitions of emotional intelligence seemed to represent a combination of cognitive and emotional abilities. This distinction between general personality (character, traits, or competencies) and intelligence (cognitive abilities) became the distinguishing feature of three different models of emotional intelligence: ability based, competency based and trait based (non-cognitive) emotional intelligence, as described in section 2.2.

It is clear the interest in emotional intelligence challenged long-held assumptions of what leads to success in life, bringing 'a more balanced view of the role of cognition and emotion in determining life outcomes' (Emmerling & Goleman, 2003, p. 8). But Ledoux (1994a) argued that an important challenge facing neuroscientists was to determine how thalamic and cortical inputs to the amygdala interact in the initiation and control of emotional responses. Believing these neurological theories to be speculative, at the time, Mayer and Salovey (1993) suggested

some sort of integration between affect and thought may occur at a neurological level (and that) interconnections between certain brain locations may contribute to conceptualization of emotional-motivational patterns' (Mayer & Salovey 1993, p. 438).

Additional future research in neuroscience will certainly have important implications for the development of the construct of emotional intelligence. In particular, whether non-intellective aspects of general intelligence (competencies) and/or a broad set of mental abilities should be classified as intelligence. For example, research into the neural bases of decision making is showing that emotional processes play an important role in decision processes (Sanfey & Cohen 2004; Sanfey, Rilling, Aronson, Nystrom & Cohen 2003). But before examining models of emotional intelligence, this review explored definitions of emotional intelligence, describing the interplay between emotion and intelligence.

### **2.1.3 Emotional intelligence**

The state of the field – two views on emotional intelligence:

1. Emotional intelligence (EI) involves the ability to reason with emotion and of emotions to enhance reasoning...Broader definitions of EI are probably improper because when the term EI is used to include an array of attributes...it becomes unclear what EI actually is and the construct begins to emulate existing measures...Keeping EI restricted to an ability model makes it possible to analyse the degree to which EI

specifically contributes to a person's behaviour (Brackett & Mayer 2003, pp. 8-11).

2. The jury is still out on whether or not there is a scientifically meaningful measure of emotional intelligence (S. Epstein, quoted in Matthews et al. 2002, p. 3). The concept of emotional intelligence is invalid both because it is not a form of intelligence and because it is defined so broadly and inclusively that it has no tangible meaning (Locke 2005, p. 425).

The literature overwhelmingly supports the view that emotional intelligence is a scientifically valid construct, albeit with ongoing discussion of a unitary concept and further factor analysis (Palmer, et al. 2005) and reservations held about internal consistency and factor structure (Pérez et al. 2005). Emotional intelligence refers, in part, to 'an ability to recognise the meanings of emotional patterns and to reason and solve problems on the basis of them' (Mayer et al. 2000a, p. 400). Emotional intelligence is 'the capacity to reason about emotions, and of emotions to enhance thinking' (Mayer et al. 2004a, p. 197).

Thus, the term emotional intelligence consists of two parts:

- (1) **Emotions** – Signals that convey meanings about relationships. Some basic emotions are regarded as universal.
- (2) **Intelligence** – Your ability to reason with, or about, something.

Emotional intelligence was stated earlier to have arisen out of the fields of personality, social psychology and neuropsychology (Mayer, Salovey & Caruso 2004a). Personality described a set of behaviours acquired through learning – past experience. Social psychology focused on what people *do* rather than what people are *like*. And neuropsychology studied the relationship between brain function and behaviour. Because of the history of the field, "emotional intelligence" is described in many different forms.

One author indicated that factorial components of emotional intelligence resemble personality factors (Bar-On 1997b, p. 3). Others saw emotional intelligence rooted in cognition, mental ability (Mayer et al. 2000a). The popularised concept of emotional intelligence equated it with good social behaviour: self-control, persistence, empathy, motivation, and warmth (Goleman 1995, p. xii). This view saw emotional intelligence emerging as a theme from research findings on the role of emotions in human life (Chernis 2001, p. 9).

Some writers believed popular authors stretched the meaning of emotional intelligence, defining it as a list of personality characteristics, which they referred to as "mixed models" because they mix together diverse parts of personality (Mayer 1999a, p. 2). Additionally, these alternate conceptions of emotional intelligence included not only emotion and intelligence per se, but also motivation, non-ability dispositions and traits, and global personal and social functioning, which seemed to broaden and undercut the utility of the terms under consideration. These were called *mixed* conceptions because they combined together so many different ideas (Mayer, Caruso & Salovey 1999, p. 268).

One author (Palmer 2003a, p. 184) concluded that emotional intelligence could be defined usually as a conceivably related set of abilities to do with one's own and others emotions. He believed his model was similar to Goleman's (2001b), with the exception that Goleman's proposed model did not include the capacity to utilise or reason with emotions in thought, which he seemingly identified as a common aspect of EI models and measures.

Meanwhile, others indicated that all theories within the emotional intelligence paradigm sought to predict and promote personal effectiveness through understanding how individuals perceived, understood, utilised, and managed emotions (Emmerling & Goleman 2003, p. 12). And another author stated that separating abilities related to cognitive intelligence from abilities, traits, and competencies related to emotional intelligence remained a complex issue as all definitions of emotional intelligence seemed to represent a combination of cognitive and emotional abilities (Cherniss 2001).

How then, can emotional intelligence be defined? One final, all-encompassing definition, acceptable to all major theorists of the concept, has not been formulated to date (Matthews et al. 2004; Palmer, Gardner & Stough 2003b). It has been noted that whilst definitions within the field vary, they tend to be complementary rather than contradictory (Ciarrochi, Chan & Caputi 2000; Law, Wong & Song 2004; Pérez et al. 2005). This review examined how authors of various models of emotional intelligence described the concept.

It was stated earlier that Mayer and Salovey were the first researchers to use the term *emotional intelligence* in scientific articles in 1990, the term having been employed occasionally in the academic literature from the mid-1960s (Mayer & Cobb 2000; Matthews et al. 2002; Pérez et al. 2005). Mayer and Salovey reviewed their initial definition in 1997 and restated it in 1999, describing emotional intelligence as,

The subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use the information to guide one's thinking and actions (Salovey & Mayer 1990, p. 189).

The ability to perceive accurately, appraise, and express emotion, the ability to access and/or generate feelings when they facilitate thought, the ability to understand emotion and emotional knowledge, and the ability to regulate emotions to promote emotional and intellectual growth (Mayer & Salovey 1997, p. 10).

An ability to recognise meanings of emotions and their relationships, and to reason and problem-solve on the basis of them. Emotional intelligence is involved in the capacity to perceive emotions, assimilate emotion-related feelings, understand the information of those emotions, and manage them (Mayer, Caruso & Salovey 1999, p. 267).

Following Mayer and colleagues, Goleman (1995) argued that emotional intelligence involved self-control, zeal and persistence, and the ability to motivate oneself. Goleman described abilities

such as being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one's moods and keep distress from swamping the ability to think; to empathise and to hope (Goleman 1995, p. 34).

Goleman argued that emotional intelligence represented 'character' (Goleman, 1995, p. 285). He later described emotional intelligence as

the capacity for recognising your own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships' (Goleman 1998a, p. 375).

And later still, Goleman (2001a) referred to emotional intelligence as abilities to recognise and regulate emotions in ourselves and in others.

Other researchers defined emotional intelligence as good character or social skills, and tested emotional intelligence as a set of emotional competencies, observed in overt emotionally intelligent behaviour.

Goleman (2001b) adapted his framework of emotional intelligence – set out in *Working With Emotional Intelligence* (1998a) – in a new version of that model. His new model was based on 'EI competencies', which he described as, 'a learned capability based on emotional intelligence that results in outstanding performance at work' (1998a, p. 28). In this new model, Goleman looked at the physiological evidence underlying emotional intelligence theory, and reviewed a number of studies of the drivers of workplace performance, and the factors that distinguished the best individuals from the average ones.

Matthews et al. (2002) addressed emotional intelligence primarily as an individual-difference construct, by seeking systematic individual differences in emotion-related processes that promote successful adaptation (or maladaptation). But Emmerling and Goleman (2003) argued, where emotional intelligence, as defined by Mayer & Salovey, represented our potential for achieving mastery of specific abilities in this domain, the emotional competencies themselves represented the degree to which an individual has mastered specific skills and abilities that build on emotional intelligence and allow them greater effectiveness in the workplace. And Reuven Bar-On defined emotional intelligence as

an array of noncognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures (Bar-On 1997a, b, 2000; 2001).

Emotional intelligence was also variously defined as:

- The intelligent use of emotions: you *intentionally* make your emotions work for you by using them to help guide your behaviour and thinking in ways that enhance your results (Weisinger 1998, p. xvi, 1).
- Involving the ability to understand emotions in oneself and others, relate to peers and family members, and adapt emotionally to changing environmental concerns and demands (Stein, S J, Publisher, Mayer et al. 2002b, p. xiv).
- EI (if it is anything at all) may be a transactional construct reflecting the degree of match between the person's competence and skills, and the adaptive demands of the environments to which the person is exposed (Matthews et al. 2002, p. 531).
- A conceptually related set of abilities to do with one's own and others emotions, specifically; the ability to perceive and express one's own emotions; the ability to perceive and understand the emotions of others; the ability to allow emotions to direct one's own reasoning; the ability to manage one's own emotions; and the ability to manage the emotions of others (Palmer 2003a, p. 184).
- The capacity to deal effectively with one's own and others emotions. When applied to the workplace, emotional intelligence is about thinking intelligently with emotions; perceiving, expressing, understanding and managing emotions in a professional and effective manner at work (Genos 2005).
- Emotional intelligence refers to abilities to do with emotions including (but not limited to), the ability to perceive, understand, utilise and manage one's own and others' emotions (Palmer & Stough 2005).

Thus, in summary, emotional intelligence appeared to be linked with:

1. **Mental abilities** (skills and knowledge). In this model, emotional intelligence was focused on emotions themselves and their interactions with thought; emotion related cognitive abilities. Mental ability emotional intelligence was measured in terms of one's ability to complete a performance-based task (Mayer & Salovey 1997; Mayer et al. 2000a; Pérez et al. 2005; Salovey & Mayer 1990).

For example, do you or do you not have the ability to be empathetic? Empathy is the ability to see the world through another person's perspective, regardless of what you think of the other person's perspective. Therefore, taking an adversarial relationship and turning it into a collaborative alliance. You'll lack the ability to be empathetic if you haven't had help in nurturing these skills growing up. People who lack empathy can be assisted to develop the ability by linking emotions. Having a high ability to perceive and understand emotions will assist you in developing an ability to empathise with others. (Gosling & Gosling 2004)

The only instrument available currently to measure mental abilities is the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test – see Measuring emotional intelligence, section 2.3.

- (2) **Non-intellective competencies** (traits). Trait models treated mental abilities and a variety of other characteristics such as motivation and social activity as a single entity; emotion-related behavioural dispositions. Trait emotional intelligence was measured in terms of one's own view (self-report) of emotional intelligence capacities (Goleman 1995, 1998a; Mayer et al., 2000a; Bar-On 1997; Palmer 2003a; Pérez et al. 2005).

For example, how good are you at being empathetic? Emotional competencies – such as high flexibility and optimism – are linked to empathy. Understanding your emotional competencies and the links between them, will assist you in developing the areas in which you are

weak, and moderating the areas in which you score high. For example, a high flexibility score may indicate you are unable to be very assertive.

Several instruments are currently available currently to measure emotional competencies. These include: EQ-i: BarOn Emotional Competency Inventory (Bar-On 1997), ECI: Emotional Competency Inventory (Boyatzis et al. 2000), and Genos EI test (formerly SUEIT: Swinburne University Emotional Intelligence Test) (Genos 2005) –see Measuring emotional intelligence, section 2.3.

The non-intellective concepts of emotional intelligence (Goleman 1998, 2001b; Bar-On 1997b, 2000) referred to outcomes of emotional intelligence. If you measured these competencies and called them emotional intelligence, then you have the best test. In the mental ability construct (Mayer & Salovey 1997) the authors thought it better to ask if these skills affected your competence in the workplace? If the answer was yes, then you have a responsibility to improve them as mental abilities.

Other writers (Matthews et al. (2002, pp. 21-22) suggested that emotional intelligence (EI) could be seen as any of the following, they being concerned primarily with the second option:

1. A general quality of human beings. That is, a faculty for handling emotional encounters possessed by every normal person.
2. A quantitative spectrum of individual differences in EI. In other words, people can be ranked in terms of how much EI they possess.
3. A qualitative, fine-grained account of how the individual person manages emotion, providing no direct basis for comparison between people.

#### **2.1.4 Summary**

This review of literature on emotion, intelligence, and emotional intelligence highlights the considerable disparate views of authors in the field. At the same time, this review draws together the essential variables that may comprise a final comprehensive theory on emotional intelligence. On this, Matthews et al. (2002) quoted S. Epstein, 'The jury is still out on whether or not there is a scientifically meaningful measure of emotional intelligence' (p. 3). Locke (2005) suggested that emotional intelligence is so broadly defined and inclusive that it is vague and without meaning. In a more optimistic view Mayer et al. (2004b) reported on The American Psychological Association (APA) assignment of creating a consensus document regarding intelligence and related mental abilities, and argued that despite the over claims of the popularisers and views of pessimists, their perspective was more consistent with conclusions of the APA task force that progress was being made.

It is contended that emotional intelligence, as an ability model, met the three criteria for a standard intelligence: (1) it consisted of mental abilities, (2) those abilities met certain correlational criteria, and (3) the abilities developed with age (Mayer, Caruso & Salovey 1999, p. 291; Palmer et al. 2005). This review next examines some of the various models of emotional intelligence constructed to test and measure mental abilities and non-intellective competencies.

### **2.2 Models of Emotional intelligence**

The author stated earlier in this literature review that the definition of emotional intelligence was an unsettled issue; much less a consensus of what it comprised and how it should be measured. Leading authors in emotional intelligence have compared and contrasted various models and measures of emotional intelligence developed so far.

Until 2000, the literature pointed to two different models to explain the theory of emotional intelligence (Cobb & Mayer 2000; (Mayer et al. 2000a, p. 399). These models are:

- **Mental ability** (performance-based) models which focus on the interplay of emotion and intelligence as traditionally defined (Brackett & Mayer 2003; Mayer et al. 2000a), and
- **Mixed** (self-report) models, which describe a compound conception of intelligence that includes mental abilities, and other dispositions and traits. (Bar-On 1997a; Goleman 1998; Palmer 2003a)

The mixed model has been called a personal factors model as distinct from the emotional intelligence ability model (Dulewicz et al. (2003) as these models (that is, Bar-On 1997a; Dulewicz & Higgs, 2000), they argued, were derived from empirical research into personal factors related to EI, and particularly into 'emotionally and socially competent behaviour' (Bar-On 2000, p. 34, p. 406). A second mixed model formulated emotional intelligence in terms of a *theory of performance* (Goleman 1998a, p. 2).

Some disagree that emotional intelligence is related to ability or mixed models, but on the method of measurement (Pérez et al. 2005). Nevertheless, the mental ability model is probably the only one that is aptly called emotional intelligence (Mayer et al. 2000a, p. 416). Of the two different models, writers argued that ability models placed emotional intelligence within the sphere of an intelligence, in which emotion and thought interact in meaningful and adaptive ways, whereas mixed models blended various aspects of personality in what is often a haphazard manner. The resulting mixture of traits, dispositions, skills, competencies, and abilities was labelled emotional intelligence, even though the model predominantly involved neither emotion nor intelligence (Caruso, Mayer, & Salovey 2001, p. 307).

However, since the conception of the emotional quotient (EQ) concept by Bar-On in 1980 (Bar-On 1997a), the emotional intelligence (EI) construct by

Salovey and Mayer in 1990 (Mayer et al. 2000a; Caruso 2004; Emmerling & Goleman 2003; Mayer & Salovey 1997; Salovey & Mayer 1990), and the popularisation of emotional intelligence in 1995 (Goleman 1995; 2005), one author (Caruso 2004) proposed three approaches to emotional intelligence: the trait, competency, and emotional intelligence approaches (figure 2.1), discussed in sections 2.2.1 to 2.2.3. The study then provides, in section 2.2.4, a brief review of an additional proposal, a taxonomy for emotional intelligence.

Figure 2.1 – Caruso's proposed three approaches to emotional intelligence

<b>Term</b>	<b>Current Approach</b>	<b>Related to</b>
Trait Approach (Bar-On)	Traits related to adaptation and coping (e.g., assertiveness).	Models of personality and dispositional traits.
Competency Approach (Goleman)	Acquired skills and competencies underlying effective leadership (e.g. influence).	Leadership competency models.
Emotional Intelligence (Mayer, Salovey, Caruso)	Intellectual abilities using emotional information (e.g., emotion identification).	Models of general, or standard, intelligence.

### 2.2.1 Trait approach

The trait approach, referred to earlier as a "mixed model" of emotional intelligence (Mayer et al. 2000a), was developed initially by Bar-On (1997a,b). It was the first major theory on emotional intelligence to emerge. In his doctoral dissertation in 1998, Bar-On 'coined the term *emotional quotient* (EQ), as an analogue to intelligence quotient (IQ)' (Emmerling & Goleman 2003, p. 13). The trait approach

combines what qualifies as mental abilities – for example, emotional self-awareness – with other characteristics considered separable from mental ability, such as personal independence, self-regard and mood (Mayer et al. 2000a, p. 402).

Pérez et al. (2005) summarise 15 trait emotional intelligence measures that were constructed between 1995 and 2003.

Bar-On (2000) preferred to refer to his construct in terms of emotional and social intelligence. He suggested

emotional and social intelligence is a multifactorial array of interrelated emotional, personal, and social attributes that influence our overall ability to actively and effectively cope with daily demands and pressures' (Bar-On, 2000, p. 385).

Brackett and Mayer argued, '...among the EI measures, the EQ-i is highly related to personality' (2003, p. 7).

Bar-On's emotional intelligence test – the Bar-On EQ-i (Bar-On, 1997a) – provides a subjective assessment (self-report), as to how well you meet a specific standard; how competent you are at using your 'interrelated emotional, personal, and social abilities that help you cope with daily demands' (Bar-On 2001, p. 87). The Bar-On EQ-i looks at environmental and social factors with 10 key factorial components of emotional intelligence and five facilitators of 'emotionally and socially intelligent behaviour' (Bar-On 2001, p. 87), listed at Appendix F.

### **2.2.2 Competency approach**

Goleman (2001b) viewed emotional intelligence as a set of 20 competencies in four domains deriving from distinct neurological mechanisms that distinguish each domain from the others and all four from purely cognitive domains of ability. He argued,

Intellectual abilities...in other words, the components of IQ...are based primarily in specific areas of the neocortex. When these neocortical areas are damaged, the corresponding intellectual ability suffers. In contrast, emotional intelligence encompasses the behavioural manifestations of underlying neurological circuitry that primarily links the limbic areas for

emotion, centering on the amygdala and its extended networks throughout the brain, to areas in the prefrontal cortex, the brain's executive centre (Goleman 2001b, p. 3).

Goleman (1995, p. 42) created a model following Gardner's (1983) lead and the model of emotional intelligence first proposed by Salovey and Mayer (1990). He originally included five main domains in his model: (1) knowing one's emotions, (2) managing emotions, (3) motivating oneself, (4) recognising emotions in others, and (5) handling relationships (Goleman, 1995, p. 43). These five domains were later collapsed into four: (1) self-awareness, (2) self-management, (3) social awareness, and (4) relationship management (Goleman 2001b).

Goleman and others (Boyatzis et al. 2000; Goleman 2001b) constructed the emotional competency inventory to measure emotional intelligence under the competency approach. Goleman hypothesised emotional intelligence was the ability to recognise and regulate emotions in oneself and others. Where he differed from other approaches to emotional intelligence was his omission of the capacity to utilise reason with emotions in thought, which Palmer (2003a) identified as one essential variable in his five-factor model of emotional intelligence.

Mayer et al. (2000a, p. 405) hold that Goleman's emotional competency inventory concept is a mixed model that bears considerable overlap with other mixed models and concepts related to emotional intelligence, such as, achievement motivation, alexithymia (a diagnostic category thought to describe individuals who have poor access to emotion words, Mayer, et al., 1990, p. 773), self-esteem, and subjective well-being. They argued Goleman's concept was a mixed model of emotional intelligence, suggesting Goleman knew that he was moving from emotional intelligence to a broader construct when he included in his model social and emotional competencies and a body of skills he called character.

Against this, Goleman (2001a) argued Mayer, Salovey and Caruso's model was based on the psychometric tradition and the fulfilment of three criteria to be

defined as intelligence. Whereas, following Gardner's (1983, 1999) lead – who proposed broadening the notion of intelligence so that it incorporated many significant faculties that had traditionally been beyond its scope – Goleman (2005) argued emotional intelligence and EI competence were intimately related, but not of the same order. Whilst the proposed three approaches framework (Caruso 2004) seemed reasonable to him, the working relationship between a competence and the underlying intelligence on which it builds needed to be well understood.

Emmerling & Goleman (2003) focused on the ever increasing understanding in neuroscience that cognition and emotions were interwoven in mental life, and suggested that different measures of emotional intelligence that were not correlated were tapping different aspects of the construct. Here the matter rests for the time being.

### **2.2.3 Emotional intelligence approach**

Caruso's (2004) framework proposed the term *emotional intelligence* be reserved for intelligence or ability-based models of emotional intelligence. This approach (a mental ability model) was the preferred theory of Mayer, Salovey and Caruso (2000a, p. 404) because it was theoretically defined as more distinct from traditional intelligences, such as, verbal, performance, and social intelligence.

As mentioned earlier in this review, the models of emotional intelligence distinguished between general personality (characteristics, traits, or competencies) and intelligence (cognitive abilities). On the one hand, Mayer et al. (2000a) argued

the central difference among models is that the mental ability models operate in a region defined by emotion and cognition, whereas mixed (that is, trait and competency) models label a multitude of components as emotional intelligence' (Mayer et al. 2000a, p. 403).

On the other hand, Goleman (2005) drew a distinction between competencies and EI competencies. He held that competencies are technical skills,

relying purely on cognitive intelligence based in the neocortex. EI competencies, he argued, were abilities combining neocortical and subcortical skills, likened to Mayer, Salovey and Caruso's mental abilities theory. Goleman (2005) believed that whether one used the term "emotional intelligence" or "EI competence" was not the issue. More important was whether the working relationship between the two levels was well understood.

For a brief description of the Myer-Salovey-Caruso ability model of emotional intelligence and the MSCEIT psychometric instrument used in this study to measure the emotional intelligence of managers in Singapore, see section 2.3: Measuring emotional intelligence, Appendix B.1, and Caruso, Mayer & Salovey 2001.

#### **2.2.4 A taxonomy for emotional intelligence**

Palmer (2003a) examined the reliability and factorial validity of a number of emotional intelligence tests with an Australian population sample. He conducted a systematic review of the variables assessed by different measures of emotional intelligence looking for common dimensions of the construct, and hypothesised a five-factor model representing the communality amongst the alternative measures of emotional intelligence assessed.

- 1. Emotional Recognition and Expression**

The ability to identify one's own feelings and emotional states, and the ability to express those inner feelings to others.

- 2. Understanding Others Emotions**

The ability to identify and understand the emotions of others and those manifest in external stimuli (that is, workplace environments, staff meetings, literature, artwork, and so on).

3. **Emotions Direct Cognition**

The extent to which emotions and emotional knowledge is incorporated in decision-making and/or problem solving.

4. **Emotional Management**

The ability to manage positive and negative emotions both within oneself and others.

5. **Emotional Control**

The ability to effectively control strong emotional states experienced at work such as anger, stress, anxiety and frustration.

Caruso (2004) did not indicate where or if Palmer's model fitted into his three approaches to emotional intelligence. Palmer (2003a) argued '...there is some common variance shared between the various models and measures of EI (emotional intelligence)' (p. 171) and believed his five-factor model better represented the different approaches to EI (emotional intelligence), as a definition of the construct, than the theoretical distinctions that had been made between them. His findings revealed that his proposed taxonomic model of emotional intelligence had similarities to Mayer and Salovey's (1997) four-factor ability model of emotional intelligence and Goleman's (2001b) competency model. Palmer argued Goleman's model did not include the capacity to utilise or reason with emotions in thought, which he theoretically identified as a common facet of EI models and measures (p. 184) and Mayer and Salovey's (1997) ability model of emotional intelligence involved 'a single emotional perception factor' and a 'single emotional management facet' whereas his model involved one's own – and others' – emotion in these areas (p. 185).

Palmer (2003a) concluded that while the distinction between 'trait' (self-report) and 'ability' (performance-based) models and measures of emotional intelligence may assist us to understanding conceptually the voluminous literature on emotional intelligence, his findings suggested that it may be premature to describe these aspects of emotional intelligence as two fundamentally distinct constructs. He reflected on the conclusion that the different approaches to the

conceptualisation and measurement of emotional intelligence tend to be complementary rather than contradictory (Ciarrochi et al. 2000, p. 540), suggesting this may better reflect the confirmatory findings of his study pertaining to this issue (p. 171).

Palmer's (2003a) findings suggested that emotional intelligence may best be conceptualised as a set of related yet distinct variables (be they abilities, competencies, emotion-related personality traits or otherwise). This finding, Palmer believed, was consistent with Salovey and Mayer's (1990) original conception of the construct, and later theories (for example, Bar-On 1997a). In direct mail with Palmer in February 2006 he advised that his taxonomy for emotional intelligence would be expanded to include seven dimensions from the former five. Details were yet to come to hand.

### **2.2.5 Summary**

The debate over various models and definition of emotional intelligence continues (For example, see Brody 2004; Law et al. 2004; Locke 2005; Parolini 2005; Pérez et al. 2005; Petrides, Furnham & Frederickson 2004). This review so far has provided the conceptual background to the construct of emotional intelligence and presented the best-known models in the literature on emotional intelligence at July 2004, the cut-off point for this thesis. Additional readings are available at [www.eiconsortium.org](http://www.eiconsortium.org), including a new volume: *Linking emotional intelligence and performance at work. Current Research Evidence With Individuals and Groups*, 2006, eds, Druskat, VU, Mount, G & Sala, F. Each theory in this literature review has been discussed in an attempt to better understand and explain the skills, traits, and abilities associated with social and emotional intelligence. For there to be meaningful applied use of the construct the author agrees with the suggestion,

Research on emotional intelligence must be integrated with current understanding of differential psychology at both psychometric and process levels,

but the field also needs to resolve conflicts between different brands of EI (Matthews et al. 2002, p. 69).

Next, this review considers various instruments used to measure emotional intelligence, constructed by the authors of the major theoretical models.

### **2.3 Measuring Emotional intelligence**

The debate in the literature on the measurement of emotional intelligence proceeds according to instruments developed by the proponents of the best known models of emotional intelligence that have evolved since the early 1980s (Bar-On 2000). Emotional intelligence tests have been developed by Bar-On (1997a,b), Schutte, Malouff, Hall, Haggerty, Cooper, Golden & Dornheim (1998), Mayer et al. (2000b), Goleman (Boyatzis et al. 2000), Dulewicz & Higgs (2000), Palmer (2003a), Palmer & Stough (2001) and others. With the variety of tests currently available, and more being published, Matthews et al. (2002) hold, 'We cannot even be sure that different measures of EI are assessing the same underlying construct' (p. 28).

Following are brief descriptions of five different instruments for measuring emotional intelligence, each based on the author's definitional approach:

#### **(1) MSCEIT – Mayer-Salovey-Caruso Emotional Intelligence Test**

Constructed by Mayer, Salovey and Caruso (2002b) from the definition,

Emotional intelligence involves the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Mayer & Salovey 1997, p. 10).

The MSCEIT is an ability test of emotional intelligence designed for adult ages 17 years and older. Normative data are from a sample of 5,000 individuals. The MSCEIT consists of 141 items that yield a total emotional intelligence score, two Area scores, and four Branch scores. The eight

task-level scores are reported for research and qualitative use only (Mayer et al. 2002b, pp. 1-8).

The MSCEIT asks test takers to:

1. *Identify* the emotions expressed by a face or in designs.
2. *Generate* a mood and solve problems with that mood.
3. *Define* the causes of different emotions; understand the progression of emotions.
4. *Determine* how to best include emotion in our thinking in situations involving ourselves or other people.

(2) **Bar-On EQ-i – Emotional Quotient Inventory**

Bar-On described the EQ-i, a standardised psychometric measure, as 'a self-report measure of emotionally and socially competent behaviour that provides an estimate of one's emotional and social intelligence. As the first emotional intelligence test to be published, it may be more accurately described as 'a self-report measure of emotionally and socially competent behaviour that provides an estimate of one's emotional and social intelligence' (Bar-On 2000, p. 364; Palmer, Manocha, Gignac & Stough 2003, p. 1192).

The EQ-i inventory takes approximately 40 minutes to complete. It assesses 133 social 'standards', 'statements', or 'competencies' and measures how you perform these 'competencies' in your environment. The total EQ-i scale score encapsulates how successful you are in coping with environmental demands, and presents a 'snapshot' of your present emotional well-being measured over a five point scale – 1 being very seldom true, and 5 being very often true. Scoring is grouped into five EQ composite scale scores and 15 EQ subscale (Appendix F) scores.

Mayer, Salovey and Caruso (2000a) thus determined,

Bar-On's theoretical work combines...mental abilities (e.g., emotional self-awareness) with other characteristics that are considered separable from mental ability, such as personal independence, self-regard, and mood; this makes it a mixed model (2000a, p. 402).

**(3) ECI – Emotional Competence Inventory**

Constructed from Goleman's (1995, 1998a, 2001b) competency model of emotional intelligence in conjunction with the Hay Group, Mayer et al. (2000a, p. 402) called this a 'mixed' model. This EI scale was designed for organisational settings, requiring informant reports (Brackett & Mayer, 2003). The emotional competency inventory (Boyatzis et al. 2000) is a 360-degree tool designed to assess the emotional competencies of individuals and organisations (Emmerling & Goleman 2003). An emotional competence is 'a learned capability based on emotional intelligence that results in outstanding performance at work', (Hay Group 1999b; Goleman 2001b).

The ECI is a 360-degree feedback tool measuring twenty competencies (CREIO, 2004). Respondents are asked to 'indicate the degree to which statements about EI-related behaviours...were characteristic of themselves' (Goleman 2001b, p. 2). The score is a reflection of one's own rating and of others at work. The ECI takes approximately 30 to 45 minutes to complete.

**(4) SREIT – Self-report Emotional Intelligence Test**

Developed by Schutte et al. (1998), the SREIT is based upon the original ability model of emotional intelligence of Salovey & Mayer (1990). The SREIT is a self-report measure comprising a single-factor for 33-item scales of emotional intelligence.

Palmer (2003a) holds that 'research to date on the SEI[T] suggests that it is a reliable self-report measure of EI with a consistent factor structure that correlates meaningfully with theoretically related variables' (p. 115).

**(5) Genos EI Assessment Scale**

Formerly The Work-Place Swinburne University Emotional Intelligence Test (SUEIT), the Genos EI Assessment Scale (SUEIT; Palmer & Stough, 2001) was constructed as a competency based 360-degree multi-rater measure of emotional intelligence, designed specifically as a leadership development tool for Australian workplace applications (Palmer & Stough 2001, 2005). Developed by Con Stough, professor of cognitive sciences, and colleague Benjamin Palmer, at Melbourne's Swinburne University, it was commercialised and marketed by Genos Pty Ltd (2005), in association with Swinburne University of Technology (2005). Today, it is one of the leading emotional intelligence assessment tools in Australia for use in the recruitment process and in training and development programs. The Scale highlights the role of emotional intelligence in individual and work-team performance, management and effective leadership (Genos 2005).

The Genos EI Assessment Scale can be applied as a self-test or as a 360-degree assessment to index the way people typically think, feel and act with emotions at work, according to an empirically-based five-factor model of emotional intelligence. It provides an overall score indicating an individual's general work-place emotional intelligence and five sub-scale scores indicating more specific capacities according to the five dimensions of the model. Raters can include the subject themselves ('self-ratings'), and manager(s), peers and direct reports ratings, thus the term 360-degree (Palmer & Stough 2005).

Those taking the test respond on a five-point scale asking them to indicate the extent to which the statements (items) are true of the way they typically think, feel and act at work (1 = never, 2 = seldom, 3 = sometimes, 4 = usually, 5 = always). With 123 items, the work place

SUEIT takes around half an hour to complete (Swinburne University of Technology 2005).

Palmer (2003a) completed his doctoral analysis on the relationships between five different approaches to the conceptualisation and measurement of emotional intelligence including

the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso & Sitarenios, 2003), the Bar-On Emotional Quotient Inventory (Bar-On EQ-i Bar-On, 1997 [a, b]), the Trait Meta Mood Scale (TMMS Salovey et al., 1995), the EI scale developed by Schutte et al., (1998) and the Twenty-Item Toronto Alexithymia Scale (TAS-20; Bagby, Parker & Taylor, 1994)' (Palmer, 2003a, p5).

Palmer (2003a) concluded

...the internal reliability of these measures of EI have improved markedly over earlier tests (and) with the exception of the BarOn EQ-i, (Bar-On 1997a) the findings of these factor analyses were consistent with the underlying theories of the various measures examined and their respective previous research findings' (Palmer 2003a, p. xii).

From this brief review of models measuring emotional intelligence it was established that the MSCEIT (Mayer, Salovey & Caruso 2002b) was the only performance-based model available at the time of the commencement of this study. Palmer (2003a) supported this view, stating that his study was 'heavily biased with self-report measures' (p. 187).

Mayer et al. (2000b) constrained their instrument to measuring the mental ability concept, separate to traits such as warmth, outgoingness, and similarly desirable virtues, so it would be possible to determine which mental abilities independently contributed to a person's behaviour and general life competence. They claimed the Bar-On (1997a) instrument mixed in non-ability traits as it was intended to answer the question, 'Why are some individuals more able to succeed in life than others?' (Mayer et al. 2000a, p. 402).

Palmer, Walls, Burgess & Stough (2000, p. 6.) held that the mental ability model of emotional intelligence by Mayer and Salovey (MSCEIT V2.0: Mayer, et al., 2003) is the most theoretically well clarified model of emotional intelligence.

As the author was interested in studying emotional abilities, as against emotional competencies or traits, this analysis affirmed the use of the MSCEIT model of emotional intelligence in this study.

### **2.3.1 Measuring emotional intelligence with the MSCEIT**

As stated earlier, Mayer and Salovey published two articles on emotional intelligence in 1990. In the first article (Salovey & Mayer 1990) they reviewed literature throughout the disciplines of psychology and psychiatry, artificial intelligence and other areas, concluding there may exist a human ability fairly known as emotional intelligence. The idea was that some people reasoned with emotions better than others, and also, some people's reasoning was more enhanced by emotions than others. Salovey and Mayer (1990) began their ability model of emotional intelligence with the idea emotions contained information about relationships. The authors argued that emotional intelligence referred to an ability to recognise the meanings of emotions and their relationships, and to reason and problem-solve on the basis of them. They added that it further involved employing emotions to enhance cognitive abilities.

The companion article (Mayer et al. 1990) presented the first ability model of emotional intelligence, suggesting emotional intelligence – measured as a true intelligence – may exist. Since that time, Mayer and colleagues refined their model of emotional intelligence (Mayer & Salovey 1997) expending considerable efforts toward developing a high-quality ability measure in the area. The newly developed Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Pronounced "Mes-keet"; Mayer et al. 1999; 2002b) is the result of this theoretical and empirical research. A description of the MSCEIT can be found at Appendix B1.

The MSCEIT is an ability model of emotional intelligence. The model consists of four classes – or branches – of emotional abilities (Mayer, Caruso, & Salovey 2000; Mayer & Salovey 1997; Mayer et al. 2000a; Salovey & Mayer

1990). It measures your potential – or set of abilities – to reason with emotions and emotional signals, and to use emotion to enhance thought – hence the term *emotional intelligence*. Specifically, the MSCEIT tests your potential or ability in four areas:

1. Your ability to perceive and identify emotion in yourself and others. To recognise how those around you are feeling, as well as perceiving emotions in objects, art, stories, music and other stimuli. How a person feels based on facial expressions and the extent to which images/landscapes express emotion.
2. Your ability to generate, use and feel emotion as necessary, to communicate feelings or employ them in the cognitive processes. How mood interacts and supports thinking and reasoning, and your ability to generate emotion and compare its sensations with other sensory modalities; for example, empathy.
3. Your ability to understand emotional information and how emotions combine and progress through relationship transitions. Understanding emotional chains – how emotions transition from one to another. For example, anger to rage, sadness to despair. And understanding emotional blends – how simple emotions assimilate together into complex feelings. For example, how acceptance, joy, and warmth equal contentment.
4. Your ability to be open to feelings, and to manage emotion in yourself and others to promote personal understanding and growth. Your ability to incorporate your own feelings into decision making for self-management; for example, how to use anger assertively. And how to incorporate emotions into decisions that affect other people, for relationship management; for example, use or acknowledge another person's anxiety to formulate a decision.

In July 1999 at the commencement of this study, the literature on emotional intelligence highlighted a dearth of reports on the applied use of EI – the utility of the concept (Ciarrochi, Caputi, & Mayer 2003). The ability-model instrument – MSCEIT – and mixed-models – EQ-i and ECI – instruments, as they were then referred to, were examined by the author as to their availability for use in this exploratory study on the emotional intelligence of managers in Singapore. Thus, the publisher of the MSCEIT, Multi-Health Systems, Inc. Toronto, Canada accredited the author to administer MSCEIT tests for the purpose of this study.

### **2.3.2 Limitations in measuring emotional intelligence using the MSCEIT**

The measurement of emotional intelligence, using the many different instruments set out above, is conducted widely by many organisations around the world (Hay Group 1999b; Genos 2005; Multi-Health Systems, Inc. 2001). Available literature reports controversy over what the tests measure, which this review has alluded to. The ongoing controversy over emotional intelligence testing (Mayer et al. 2000a) centred around:

- Its limitations for predicting successful behaviours at home and at work,
- The suggestion it is one all-encompassing 'highly desirable package (that) can be acquired or learned as a whole',
- The presentation of scientific studies supporting powerful claims, but in fact fail to do so, and
- The issue of how success may be predicted.

Limitations in the use of emotional intelligence measures (Brackett & Mayer 2003) focused on:

- The validity of the concept and reliability of what it measured,
- What aspects of the construct are inherent or can be taught,

- The reliability of tests in the market place, and
- Whether the tests are distinguishable from other personality and intelligence measures.

Davies et al. (1998) concluded that objective measures of emotional intelligence suffered from poor reliability. Roberts et al. (2001) – in a multivariate study on the MEIS (the forerunner to the MSCEIT) and other psychometric measures – questioned the claim that emotional intelligence meets traditional standards for intelligence. They claimed their study identified significant issues (on EI) that required resolution, related to both reliability and validity. They reported,

Although performance-based EI measures appear free of the redundancy with existing personality scales that plagues questionnaire measures, the validity coefficients for the MEIS also appear to be typically small (Roberts et al. 2001, p. 228).

In relation to the MSCEIT, Matthews et al. (2002) argued

the reliabilities of these performance-based scales, in almost every instance, are far from optimal... from the perspective of making valid inferences of a... scientific nature' (Matthews et al. 2002, p. 198).

Mathews et al. (2002) did acknowledge that the MSCEIT provided an overall assessment of EI that has high internal consistency (reliability).

Fineman (2004) cautioned against measurement of emotion, and thereby, emotional intelligence, arguing

The measurement of emotion is problematic, and emotional intelligence illustrates some of the problems. The psychometric approach forces emotion into a format that is convenient and politically defensible to a positivist research community. It also lends itself well to the instrumental needs of consultants who wish to 'sell' emotion. Yet, in moving hegemonically in this direction, the paradigm excludes or marginalises other forms of emotion knowing. Subjective feelings, for instance, can be hard to express and difficult to categorise. Simple scales on prescribed items will, at best, skim the surface of such experiences. At worst they fail to engage. They represent the researcher's predetermined categories more than any substantive, phenomenological, feature of the respondent (Fineman 2004, p. 731).

Professor Sternberg, IBM Professor of Psychology and Education at Yale University, cautioned, in a forward to *Emotional intelligence: Science and myth* (Mathews et al. 2002), that whilst the positive side of emotional intelligence helped to broaden the definition of intelligence, the negative side of the movement was often crass, profit-driven, and socially and scientifically irresponsible. Sternberg, however, was more optimistic about the ability-based approach over the personality (trait)-based approach to emotional intelligence believing – over time – the ability-based approach would be vindicated.

Day & Carroll (2004) contended, 'Despite claims that emotional intelligence (EI) predicts performance on work-related tasks and successful interpersonal interactions, little research exists to support these claims' (p. 1443).

In answer to their critics in regard to validity (that is, the degree to which all the accumulated evidence supports the intended interpretation of test scores for the proposed purpose, Mayer et al. 2004b, p. 252), Mayer and colleagues (Mayer et al. 2004a) argued they had demonstrated considerable and growing evidence for ability measures of emotional intelligence, such as the MSCEIT. Mayer et al. confirmed

Emotional intelligence is likely to be measured with greatest validity when it is assessed as a set of competencies or skills. Self-reported assessments in this domain may not be especially accurate or even available to conscious introspection (Salovey et al. 2001, p. 295).

In addition, Palmer, Donaldson & Stough (2002), in a study looking at the relationship between emotional intelligence abilities and life satisfaction, acknowledged that emotional intelligence abilities explained unique variance in self-reported satisfaction supporting the incremental validity of the performance-based measure of emotional intelligence. Gowing (2001) also argued that the MEIS performance-based measure of emotional intelligence had 'validity evidence based on relations to other variables' (p. 100).

Mayer et al. (2001) claimed that the progression of tests from MEIS, studied by Roberts et al. (2001), to the newer tests, The MSCEIT RV1.1 and

MSCEIT V2.0, also showed a gradual rise in reliability at the level of their individual tasks. Mayer and colleagues then suggested

the applied use of EI tests must proceed with great caution... findings here suggest that those who use the MSCEIT (V2.0) can feel more confident about the quality of the measurement tool to assess EI (Mayer et al. 2003, p. 104).

In answer to whether the MSCEIT was distinguishable from other personality and intelligence measures, Brackett & Mayer (2003) showed the MSCEIT is mostly separable from personality and well-being tests, whereas the EQ-i is highly related to personality. Mayer and colleagues (Brackett & Mayer 2003; Mayer et al. 2000a; Mayer & Salovey 1997; Salovey & Mayer 1990) contended

Broader definitions of EI are probably improper because when the term EI is used to include an array of attributes (Bar-On 1997a, Goleman 1995, 1998a; Schutte et al. 1998) it becomes unclear what EI actually is and the construct begins to emulate existing measures (Brackett & Mayer 2003, pp. 8-9).

In a recent meta-analysis examining the correlation and predictive validity of EI when compared to IQ or general mental ability (GMA), Van Rooy and Viswesvaran (2004) argued that the results demonstrated that emotional intelligence was a construct definitely worthy of future research and indicated that EI should indeed be considered a valuable predictor of performance. The authors believed the overall predictive validity of EI appeared to hold fairly constant across all performance domains and that the relationship between EI and GMA was considerably stronger when looking at only the ability based MEIS (subsequently the MSCEIT V2.0) in comparison to the other models that do not suggest a relationship between EI and GMA (that is, Bar-On's EQ-i and Goleman's ECI).

Brackett and Mayer (2003) argued the MSCEIT was both reliable and the content valid. It met several standard criteria for a new intelligence, mentioned earlier:

1. It is operationalised as a set of abilities,

2. It is objective, in that answers on tests are either right or wrong as determined by consensus or expert scoring,
3. Its scores correlate with existing intelligences while showing unique variance, and
4. Scores increase with age.

Mayer et al. (2004a) claimed,

The MSCEIT is, indeed, a convenient-to-administer test that is highly reliable at the total-score, area, and branch levels, and provides a reasonably valid measure of EI in many psychometric senses of the word *valid*... Is it critical to conduct further studies into the exact emotional and cognitive processes underlying the skills assessed by the test? Is it important to have higher reliabilities at the level of the individual task? ... Yes, absolutely, as there are for any such test (Mayer et al. 2004a, p. 211).

In an email to the author in 2004, Dr Jack Mayer said,

I sought to create an ability measure of emotional intelligence because I believe that to be the very best kind of measure for the area. Self-report measures of EI basically ask people how well they believe they can perform at emotional problem-solving, and then feeds that same information back to the individuals who provided it in a nicely organised package. In contrast, the MSCEIT actually measures EI directly, and tells the person something that they may not already know.

The true EI ability measured by the MSCEIT has been shown to measure something never-before-measured by a commercial scale. That is, in a number of now-published studies, the MSCEIT has been shown to be independent of self-reported EI, independent of other personality measures, and independent of other intelligence measures.

At the same time, the MSCEIT predicts important outcomes. People high in EI form better, more cooperative, and more meaningful relationships with others; those low in EI experience more difficulties, including aggressive encounters, alcohol and drug abuse, and similar problem behaviours.

The literature reviewed provided significant support for using the MSCEIT as the preferred measure of emotional intelligence for this exploratory study. Additionally, the author:

1. Was accredited by the publisher of the MSCEIT to administer the test, but was not accredited at the time to administer the EQ-i or ECI,
2. Could see immediately that he could apply the MSCEIT model in his clinical counselling and behavioural coaching practice to assist people to better understand their emotions and behavioural change, and
3. Agreed with Winefield and Peay (1980/1991) that self-report scales raise concerns about the possibility of the respondent, either wittingly or unwittingly, distorting the truthfulness of the impression conveyed,
4. Understood from the research completed at the time of the commencement of this study (1999) that the MSCEIT predicted important outcomes, and
5. Agreed with Brackett & Mayer (2003) who argued, 'Keeping EI restricted to an ability model makes it possible to analyse the degree to which EI specifically contributes to a person's behaviour' (p. 11). Anecdotal evidence of this accrued from using the MSCEIT with clients in the author's clinical practice.

Mayer et al's. (2002b) assessment tool, the MSCEIT, measured a distinct mental ability – the capacity to reason, in regard to emotions, and the capacity to use emotion to assist cognition. This mental ability model of emotional intelligence '... predicts important life criteria' (Brackett & Mayer 2003). The MSCEIT tapped into individual differences not contained in a self-report on aspects of personality traits, such as optimism, neuroticism, motivation, extraversion, openness to experience, agreeableness, and conscientiousness. Self-report assessment tools (for example, EQ-i and SREIT) were not so readily distinguishable from these personality measures. Some researchers believe the EQ-i and SREIT may best be characterised as types of personality inventories and not as measures of EI (see Brackett & Mayer 2003).

This review continues in sections 2.4 and 2.5 with further examination of the literature on the reported predictive abilities of the various models of

emotional intelligence, as measured by their respective instruments, on organisation effectiveness and individual manager success.

#### **2.4 Emotional intelligence, organisation effectiveness, and individual success**

*Look deeply at almost any factor that influences organisational effectiveness, and you will find that emotional intelligence plays a role* (Cherniss 2001, p. 4).

The scientific literature since 1990 on emotion, intelligence, and emotional intelligence reviewed in sections 2.1 to 2.3, established – with some continuing dissent and to varying degree – the reliability and validity of models of emotional intelligence and instruments for measuring it. A growing body of additional research in the scientific and management disciplines affirmed specifically the measurement of emotional intelligence of individual managers and/or organisations as a whole. The literature proposed that emotional intelligence was a proprietary means for predicting organisation effectiveness, through increasing the emotional intelligence of personnel – both individuals and groups. Additionally, the research argued emotional intelligence was central to predicting individual success: star performance, selection, leadership, team building, appraisal and training.

In researching the value of emotional intelligence at work, Cherniss (2000) provided a few examples of the role non-cognitive (emotional) abilities play in success at work:

1. **Learned optimism** – The causal attributes people make when confronted with failure or setbacks (Seligman 1992). Optimists make specific, temporary external attributions, for example "It's the economy stupid." Pessimists make global, permanent, internal attributions such as, "I'll never succeed" or "It's my fate to be a follower".

2. **Ability to manage negative feelings** (stress) – Emotional intelligence has as much to do with knowing when and how to express emotion, as it does with controlling it.
3. **Ability to generate empathy** – People who are best at identifying other's emotions, are more successful in their work and social lives.

Cherniss (2000) said the notion above – that emotional intelligence is important for success at work – was 'somewhat simplistic and misleading' (p. 7). Cherniss pointed to the debate – mentioned earlier in this review – as to whether emotional intelligence was a predictor of job performance (Mayer & Salovey 1997) or a "bedrock for competencies" that are a predictor of job performance (Goleman 1998). Readers are referred to Cherniss' (2004) online article for 19 points in building a case as to how emotional intelligence contributes to a company's bottom line.

Goleman's (1995) popularisation of the application of emotional intelligence, and other texts, articles, and scientific papers written since then, advocate emotional intelligence as a component of a broad spectrum of skills that:

- Predict individual leadership success (Goleman 2000a, 1998a, 1995),
- Inform transformational leadership (Ashkanasy & Daus 2002; Barling, Slater & Kelloway 2000), and
- Promote success in the work place (Caruso & Salovey 2004; Jordan et al. 2002; Nader 2003; Weisinger 1998).

In identifying what moves individuals, Goleman (1998a) said of the link between motive and emotion

*Motive* and *emotion* share the same Latin root, *motere*, "to move". Emotions are, literally, what moves us to pursue our goals; they fuel our motivations, and our motives in turn drive our perceptions and shape our actions. Great work starts with great feeling' (Goleman 1998a, p. 126).

Research suggests 'emotional intelligence is likely to take its place alongside other important psychological variables as a predictor of various

outcomes at school, home, and work' (Mayer et al. 2001, p. 240). Mayer et al. (2004b) contend,

The number of people involved in this discussion and the number of research studies now available in the area encourage us in the belief that studies of emotional intelligence, measured as an ability, and of intelligence testing generally, both have a great deal to offer the enterprise of understanding human performance and how best to foster it (Mayer et al. 2001, p. 254).

The literature argued for a potential relationship between a broad spectrum of emotionally intelligent skills (behaviours) and individual success (Caruso & Salovey 2004; Hay Group, Hackman & Wageman 2001; Goleman 2001b; Palmer & Stough 2001; Weisinger, 1998; Ashforth & Humphrey 1995). It pointed to emotional intelligence as a factor recognised in leadership and management in organisations for a number of reasons:

1. Emotional abilities were essential to self management and social management,
2. Emotional competencies identified star performers, and
3. Retention of emotionally intelligent people was the key to organisational success.

Nevertheless, controversy continued to surround what emotional intelligence tests actually measured, what they predicted, and whether the tests were distinguishable from other abilities and personality attributes (Brackett & Mayer 2003). The controversy stemmed – it seemed – from 'exaggerated claims' (Mayer 2004; Matthews et al. 2002, pp. 5, 467, 477) by Goleman (1995) and Gibbs (1995) regarding the power of emotional intelligence and its potential for prediction in life, including:

- 'At best, IQ contributes about 20 percent to the factors that determine life success, which leaves 80 percent to other forces' (Goleman 1995, p. 34).

- 'No one can say exactly how much of the variability from person to person in life's course it accounts for. But what data exist suggest it can be as powerful, and at times more powerful, than IQ' (Goleman 1995 p. 34).
- 'There is an old-fashioned word for the body of skills that emotional intelligence represents: *character*' (Goleman 1995, p. 285).
- 'It's not your IQ. It's not even a number. But emotional intelligence may be the best predictor of success in life, redefining what it means to be smart' (Gibbs 1995, *TIME*, 2 October, cover).

Mayer (2004) said that the danger lay in assuming a person who is optimistic or confident is also emotionally intelligent would be incorrect. Emmerling & Goleman (2003) stated more research – including longitudinal studies – was needed to further validate the relative importance that traditional intelligence and emotional intelligence hold to the prediction of specific criterion.

Despite the ongoing controversy over the predictive abilities of emotional intelligence, there seemed to be agreement that emotional intelligence is a force for organisation and individual success. For example, it was felt that:

- Emotional intelligence helped to predict success because it reflected how a person applied knowledge in the immediate situation; how a person got along in the world (Bar-On 1997a, p. 1).
- Higher emotional intelligence was an important predictor of significant outcomes. For example, reduced levels of problem behaviour such as drug use and interpersonal violence' (Mayer, et al. 2001 p. 240). Mayer (1999) suggested that emotional intelligence – if substantiated – broadened our understanding of what it means to be smart.

Despite these views, others (Zweig & Gruman 2004) argued for more empirical research evidence to support the contention that emotional intelligence influences either individual or corporate performance in any significant way.

### **2.4.1 Perceptions of emotion at work**

In a discussion on emotion in the workplace (Ashforth & Humphrey 1995), the authors argued that experience of work is saturated with emotion and that emotionality and rationality are intertwined. And because of neglect of the impact of everyday emotions on organisational life – by organisational researchers and practitioners emphasising rationality (cognition) of emotionality (emotion) – four mechanisms have evolved for regulating the emotional environment at work, namely: neutralising (preventing), buffering (compartmentalising), prescribing (suppressing), and normalising (diffusing and reframing) emotion.

Neutralising is used to prevent the emergence of socially unacceptable emotions, while the remaining means are used to regulate emotions that are either unavoidable or inherent in role performance: 'buffering' is used to encapsulate and segregate potentially disruptive emotions from ongoing activities, 'prescribing' is used to specify socially acceptable means of experiencing and expressing emotions, and 'normalizing' is used to diffuse or reframe unacceptable emotions to preserve the status quo (Ashforth & Humphrey 1995, p. 104).

Ashforth and Humphrey (p. 119) emphasised the 'functional complementarity' of combining emotion and cognition through organisations embracing personal engagement (emotion) along with the rationality, the traditional 'dominate administrative paradigm'. The authors argued organisations needed to: (1) move away from their focus on traditional process theories employing motivation and cognition with a focus on outcomes to embrace emotional engagement, (2) embrace symbolic management ('which draws on the qualities of the heart and of the head') and (3) foster emotional contagion ('a tendency to mimic another person's emotional experience/ expression . . . and thus to experience/express the same emotions oneself') for group level dynamics.

Written at the time when emotional intelligence was emerging in academic journals and popular literature, Ashforth and Humphrey (1995) did not mention emotional intelligence in their article. Despite this, Ashforth and Humphrey's theory of interpenetration of emotionality and rationality in organisations has

remarkable comparisons with the Mayer, et al. (2000a, p. 404) theory of emotional intelligence as a mental ability model, combining emotional and cognitive interactions and predicting a contribution to individual and organisational success.

Both theories advocated emotions as functional for organisation effectiveness: Mayer et al. (2004b) argued for developing the emotional intelligence of individuals in the workplace, and thereby the organisation as a whole. Ashforth and Humphrey advocated a cultural change of how organisations view emotion in the work place in conjunction with traditional motivational and cognitive practices, to promote social identity, a sense of community, and task effectiveness through celebrating emotion in organisational life.

Matthews et al. (2002, p. 468) believed the workplace to be a major source of negative and positive emotion; emotions being among the primary determinants of behaviour and achievement at work. They argued that emotions may impact on work-related cognitive and motivational processes, and, in turn, this would affect task and social behaviour, and performance outcomes.

#### **2.4.2 Predicting organisation effectiveness**

Brown (2005) felt that emotional intelligence challenged the idea that emotions are best left out of the workplace. Research in North America showed emotional intelligence is vital for the future development of team building, leadership, and management in corporations, government, and other organisations. For example, findings by VanRooy and Viswesvaran (2004, p. 87) revealed robust predictive validity for emotional intelligence measures for assessing performance in employment settings. Following are examples of how perceptions of emotional intelligence in the workplace have changed.

Druskat & Wolfe (2001) introduced the idea of emotionally intelligent groups, as well as emotionally intelligent individuals. As stated in section 2.3, Goleman developed his Emotional Competency Inventory as 'a 360-degree tool

designed to assess the emotional competencies of individuals and organisations' (Emmerling & Goleman 2003, p. 18). Goleman (1998a), who grounded his theory in the context of work performance, argued that in today's workplace, where performance relied heavily on improved work-place relationships, stress tolerance, adaptability, and working effectively in teams, emotional intelligence was integral to occupational success.

The BOEI: Benchmark of Organisational Emotional Intelligence (2005) was another leading-edge organisational survey designed to measure the level of emotional intelligence in an organisation as a whole and its parts. It focused on the reality that organisations grow by developing the people within it, making it a powerful and potential integral part of a company's strategic plans. Findings demonstrated that emotionally intelligent organisations were more productive.

The Consortium for Research on Emotional Intelligence in Organisations (CREIO, 2005) was founded in 1996 with a mission to aid the advancement of research and practice related to emotional intelligence in organisations. Its initial mandate was to study all that is known about emotional intelligence in the workplace. The organisation currently comprises forty four members, including leading authors referred to in this review with a strong record of accomplishment as applied researchers in the field: Reuven Bar-On, Richard Boyatzis, David Caruso, Cary Cherniss, Daniel Goleman, Ben Palmer, and Peter Salovey. CREIO has four organisational and corporate members: American Express Financial Advisors, the HayGroup, Johnson & Johnson, and the US Federal Office of Personnel Management. CREIO has issued a technical report (Cherniss & Goleman 1998) titled *Bringing emotional intelligence to the workplace*, which includes 22 guidelines for developing emotional intelligence in organisations.

The Hay Group (2005) collaborated with recognised global experts, including Daniel Goleman and Richard Boyatzis, to improve employee capabilities by developing the emotional intelligence of leaders to promote significant changes that last and make a difference in individual and organisation

performance. Genos (2005) helped organisations measure and develop the emotional intelligence of employees, teams and the organisation as a whole.

Sala (2001) reported on a study by the Hay Group of 1,214 managers in higher-level jobs, which explored the relationship between self-other discrepancy and job level with the ECI measure of emotional intelligence. Sala said,

The results of the study demonstrate that higher level employees are more likely to have an inflated view of their emotional intelligence competencies and less congruence with the perceptions of others who work with them often and know them well than lower-level employees... Helping managers and executives better understand how they are perceived by others can have significant implications for performance improvement' (Sala 2001, p. 4).

Power (2004) reported 21 organisations using the Hay Group/Goleman/Boyatzis Emotional Competency Inventory in Australia and New Zealand: AGL, Australia Post, Aurora Energy, Coca-Cola, Fuji Xerox, General Mills, Holden, Merck Sharp & Dome, Merrill Lynch, Monash University, Tabcorp, Sky City, Unilever, ANZ, Commonwealth Banking Corporation, Westpac, UBS Warburg, Air new Zealand, PricewaterhouseCoopers, Ravensdown, and the Australian Department of Defence.

In Australia, ANZ Banking Group started a "breakout and cultural transformation" EQ program in 2001, covering 300 most senior staff, 4000 senior and middle managers, and 22,000 staff with a budget of \$8 million. Woodside, Australia's largest oil and gas company, put 2,300 employees through EQ training (Cossar 2002). National Australia bank and Telstra were taking on EQ as part of their recruitment, selection and training (Nader 2003). Holden, employing some 9,000 people around Australia, has put together the LEAD – leadership through emotional intelligence, action and developing people – programme, incorporating emotional intelligence assessment (Fox 2004). AMP organised tests to assess the EQs of its financial planners (Hepworth 2004).

Despite the evidence that emotional intelligence has gained wide acceptance across the workplace internationally, industrial and organisational psychologists are cautious,

We are still very much coming to terms with the concept of emotional intelligence, what it means, and what it encompasses, and are just beginning the trek towards developing tools to measure it (Allworth Juniper 2003).

### 2.4.3 Predicting individual success

*Those who take action all have a picture in their head* – Sumantra Ghoshal, Professor of Strategic Leadership, London Business School (Mann 2000, p. 20).

This review has shown that within the industrial and organisational psychology literature, emotional intelligence has been described as underlying interpersonal effectiveness or 'people skills' at work. As such, the construct has become extremely popular with human resource consultants as a measure for identifying potential effective job candidates and as a tool for developing work place skills. In the work place, emotional intelligence has been found to contribute to: networking abilities, listening and oral communication skills, stress tolerance and adaptability, conflict management, building healthy trusting relationships with clients and colleagues, teamwork effectiveness, skills at negotiating agreements, the ability to lead, motivate and foster positive attitudes with and amongst employees (Genos 2005).

Mayer et al. (2000a) were excited about the important, incremental predictive power of emotional intelligence stating

We believe that emotional intelligence – as a mental ability – identifies a previously overlooked area of ability critical to certain human functioning. These emotionally intelligent skills lay hidden in the boundary between mental ability and non-cognitive dispositions. Emotional intelligence is the mental ability that lurks amidst the emotions...Once evolved, these emotions are modified by cultures as necessary' (Mayer et al. 2000a, p. 413).

Bar-On (2001) reported on a study that looked at the connection between emotional intelligence – as measured by the self-report Bar-On EQ-I – and found there was a degree of correlation between emotional intelligence and self-actualisation. Working with Abraham Maslow's mid-1930's construct of self-

actualisation – that is, the process of developing your talents, capacities, and potential to the fullest – Bar-On argued emotional intelligence played an important role in self-actualisation and is more than cognitive intelligence in influencing one's ability to do one's best, accomplish personal goals and actualise one's potential.

Henley Management College (HMC) (2005) conducted a study into the quality of working life and stress of managers in a large multi-national retail organisation. In addition to a number of measures of stress and job performance, participants completed two measures of Emotional Intelligence (EI) – the Dulewicz and Higgs EIQ (Emotional Intelligence Questionnaire) and the Bar-on EQ-i (Bar-On 1997a). The study provided an opportunity to explore the degree to which the existing EIQ validity results might be replicated on a higher level of management; to investigate the hypothesis that EIQ is related to morale and stress at work, and to explore changes in EIQ scores after an EI training course.

Key findings of the HMC study were that correlations between the EIQ and measures of morale and stress at work, demonstrated the relevance of EI to this area. Significant relationships found between EIQ and current job performance provided further evidence of the value of the EIQ for predicting managerial performance. Evidence showed improvements of EI scores after training from both EI instruments, demonstrating that emotional intelligence can be developed.

Next, this review examines literature specific to predicting individual performance in the workplace.

#### **2.4.3a Star performance**

Star performance is seen as a natural consequence of developing and using certain emotion competencies and skills (Goleman 2000b, p. 17). Many large corporations today have employed trained psychologists to develop 'competency models' to aid these companies in identifying and training high potential

employees (Goleman 1998b). The HayGroup (2005), with which Goleman is associated, promoted emotional intelligence for star performance, 'Emotional intelligence is twice as important as IQ plus technical skills. Emotional intelligence is more than 85 percent of what sets star performers from the average'.

Of star performance, Emmerling & Goleman (2003) said

In a recent meta-analysis examining the correlation and predictive validity of EI when compared to IQ or general mental ability, Van Rooy and Viswesvaran (2004, p. 87) found IQ to be a better predictor of work and academic performance than EI. However, when it comes to the question of whether a person will become a 'star performer' (in the top 10 percent, however such performance is appropriately assessed) within that role, or be an outstanding leader, IQ may be a less powerful predictor than emotional intelligence (Emmerling & Goleman 2003, p. 5).

Emmerling & Goleman (2003) pointed out that human resource and other corporate executives responsible for hiring and promotion in organisations are most interested in assessing capabilities related to outstanding performance and leadership. They explained the absence of quantitative studies on top leaders may be due to a taboo – 'CEOs and others who hold power are resistant to allowing themselves to be assessed by objective measures, including IQ tests' (p. 6). The authors reported on research on star performers that suggested IQ alone did not predict performance in this domain as well as competencies that integrate cognitive, emotional and social abilities.

Other researchers conducted a study of 40 employees of a retail store, using the SREIT, that reported individuals high in emotional intelligence, to see whether emotional intelligence related to trait, mood state, and self-esteem. They reported, 'Individuals high in emotional intelligence have a greater ability to perceive, understand, regulate, and harness emotions' (Schutte, Malouff, Simunek, McKenley & Hollander 2002, p. 781). They reported

Individuals high in emotional intelligence may be able to maintain higher positive mood states and higher self-esteem states because their emotion regulation abilities enable them to counter some of the influence of

negative situations and maximise the influence of positive situations (Schutte et al. 2002, pp. 781-782).

Finally, Mayer and colleagues suggested that, 'EI positively contributes to job performance when the maintenance of positive personal commitments is important to success' (Mayer et al. 2004a, p. 209).

### **2.4.3b Selection**

In a discussion on broadening the definition of intelligence in order to obtain a more realistic and valid assessment of the factors that lead to personal effectiveness and adaptation, Emmerling & Goleman (2003) argued that 'a position of leadership in today's workplace ... requires a high level of cognitive ability to process the complexity of information leaders face daily' (p. 7), but measures of IQ suffer from range restriction – having an IQ in a superior range guarantees a superior performance – and are limited in predicting performance and career success. 'While IQ may account for a more substantial amount of the variance in performance in entry-level positions ... it rarely acts to reliably distinguish average and star performers' (p. 7). The failure of IQ to predict a large portion of variance in performance among managers motivated interest in developing alternate methods of assessment, such as emotional intelligence.

Cherniss (2004), in building a case for how emotional intelligence contributes to the bottom line of an organisation, reported on the use of the EQ-i in the selection of recruiters for the US Air Force. The US Air Force used the EQ-i to select the Air Force's front-line HR personnel, and found that the most successful recruiters scored significantly higher in the emotional intelligence competencies of assertiveness, empathy, happiness, and emotional self-awareness. The Air Force also found that by using emotional intelligence to select recruiters, they increased their ability to predict successful recruiters by nearly three-fold. Cherniss then went on to provide other examples of how emotional intelligence and emotional competencies assisted in the hiring and selection process.

Chu & Kwan (1999), from the National University of Singapore, believed that in selecting employees, companies looked for attitudes including, team player, commitment, enthusiasm, result-orientation, perseverance, and humility. They desired those graduates with both technical skills and emotional intelligence.

On a cautionary note, Mayer et al. (2002b, p. 10) state that when used as part of a recruitment or selection process, using the MSCEIT results alone is unethical; recruitment needs to take account of all aspects of an applicant's attributes, experience, and commercial and legal implications of employment.

### **2.4.3c Leadership**

*Leadership is about a long-term trust feeling of trust – Sir Paul Judge*  
(Mann 2003, p. 19).

Popular management and emotional intelligence texts (Caruso & Salovey 2004; Covey 1989; Feldman 1999; Goleman 1995, 1998a; Gosling & Gosling 2004; Matthews et al. 2003; Stein & Book 2000; Weisinger 1998) place habits, abilities, skills, competencies in the context of individual behaviour for effective living and working, be it in occupational settings, home, or other social groups. Specifically, emotional intelligence is one of a broad spectrum of skills, which managers have in varying levels. The promise of these texts is they provide the modus operandi for human and organisational effectiveness, which ultimately is to the benefit of individuals and the organisations in which they work.

Covey's seven habits (1989) are '... the intersection of knowledge, skill, and desire' (p. 47) and '... represent the internalisation of correct principles upon which enduring happiness and success are based' (p. 23). Many of us tend to see things not as they are but as we have been conditioned to see them. A person's cognitive appraisal puts up a screen of words in his or her mind – a map of how one *should* act. McKay and Fanning (2000) believed that cognitive distortions – that is, conditioned forms of thinking that one has traded for reality – are actually

bad habits; habits of thinking that one consistently uses to interpret reality in an unrealistic way.

Covey (1989, p. 24) described these maps – or bad habits – in our head as divided into two categories; maps of the way things are (realities), and maps of the way things should be (values). Covey believed that we perceive everything we experience through our mental maps and seldom question their accuracy. We are generally unaware that we have them, but simply assume that the way we see things is the way they really are – or the way they should be. Because our attitudes and behaviours grow out of those assumptions, they become the way we see things; the way we think and the way we act.

The danger of these habits or "maps in our head" is they become absolute and fixed beliefs, an unbending sense of right and wrong. Covey presented an inside-out approach to leadership effectiveness centred on principles and character. Inside-out, meaning change comes from within. Once this is accepted there is a paradigm change in the way individuals see events. So it is with emotional intelligence – its existence changes our perspective (Mayer 2000b).

Adding to the idea that leadership involved handling change, Goleman (1998a), referring to John Kotter – a Harvard Business School leadership expert on differences between management and leadership – argued

*Management* refers to the ways complex enterprises are kept orderly, nonchaotic, and productive. *Leadership*, by contrast, refers to effectively handling the changes that the competitiveness and volatility of the times have wrought (p. 234).

In the *Harvard Business Review* article, 'What makes a leader?' Goleman (1998b) said

I have found...that the most effective leaders are alike in one crucial way: They all have a high degree of what has come to be known as *emotional intelligence*. It's not that IQ and technical skills are irrelevant...But my research, along with other recent studies, clearly shows that emotional intelligence is the *sine qua non* of leadership (Goleman 1998b, p. 82).

Goleman (1998b) championed emotional intelligence as a broadly based set of competencies that were differentiated from technical skills – such as accounting and business planning – and cognitive abilities such as analytical reasoning. Goleman argued emotional intelligence (EI competencies), was twice as important than technical and IQ skills for jobs at all levels and the higher the seniority of a person considered to be a star performer, the more emotional intelligence capabilities presented as the reason for his or her effectiveness. In short, Goleman believed the numbers were beginning to tell a persuasive story about the link between a company's success and the emotional intelligence of its leaders (p. 84).

Then, from research of 3,871 individuals selected from a database of more than 20,000 executives worldwide, Goleman (Bernhut 2002; Goleman 2000a) found six distinct leadership styles, each springing from different components of emotional intelligence. He argued that leaders with a critical mass of six or more emotional intelligence competencies were far more effective than their peers. How a leader leads – whether he or she adopts a 'command and control' or 'pace-setting' style, versus a 'visionary', 'coaching', 'affiliative' or 'democratic' style that resonates with people in the workplace – sets the emotional climate of the workplace, which in turn drives business performance. Only the latter four of the six styles listed had a positive effect on climate and results. An emotionally intelligent leader in Goleman's model – one who practised self-awareness, self-management, social awareness (empathy), and relationship management – would be able to articulate a vision and inspire others. Goleman argued, 'A leader's primal task is an emotional one – to articulate a message that resonates with their followers' emotional reality, with their sense of purpose – and so to move people in a positive direction' (Bernhut 2002, p. 14).

As to how one becomes an emotionally intelligent leader, Goleman suggested, 'it requires that the person realise the downside of their leadership style and their abilities, and that they get an assessment' (Bernhut 2002, p. 15). Dearlove (2003) also argued that a charismatic leader used the ability of persuasion (empathy) and communication.

Managing the mood of an organisation seems critical. Goleman and colleagues picked up on Goleman's (2000a) earlier assertion that a leader's emotional intelligence created a certain culture or work environment suggesting, 'The leader's mood and behaviours drive the moods and behaviours of everyone else' (Goleman, Boyatzis & McKee 2001, p. 44). If these two factors are potent drivers of business success, then a leader's premier task is emotional leadership. Here, emotional leadership is understood as the leader managing his inner life so that the right emotional and behavioural chain reaction occur, but misses the cognitive link of the mental ability model of emotional intelligence. Goleman, et al. said, 'Emotional leadership is the spark that ignites a company's performance, creating a bonfire of success or a landscape of ashes. Moods matter that much' (Goleman et al. 2001, p. 51).

It seemed to Goleman, that you could be a successful leader without much emotional intelligence only if you are lucky and have everything else going for you, such as, extraordinary markets, incompetent competitors, and incompetent higher-ups. This is a contrast to Mayer's argument that the scientific jury was still out on how important self-awareness was to successful leadership (Voices, 2004).

Others have written that leadership is a relationship (Goldsmith & Morgan 2004); an emotion-laden process grounded in self-awareness (George 2000; Voices 2004) involving trust (Mann 2003) and interpersonal skills or behaviours that illicit our choice to follow (Nirenberg 2003). Emotional leadership is applying emotionally intelligent behaviour to gain trust in relationships (Gosling & Gosling 2004).

The literature suggested leadership in organisations, which included managers as leaders, whilst acknowledging the differences between the work of managers and the work of leaders (Caruso & Salovey 2004; Gosling & Gosling 2004; Mann 2003), could be characterised as transformational or transactional in nature (Gardner & Stough 2001; Palmer et al. 2000; Ashforth & Humphrey 1995). Transformational leaders were seen as mobilising, framing, and using emotion to foster change and building commitment to an organisation's values and goals. By

contrast, transactional leaders focused on cognition and motivation to show subordinates how effort is linked to rewards, such as pay and security. 'By arousing emotion and harnessing it to the pursuit of lofty goals, transformational leadership represents a potentially potent force for change' (Ashforth & Humphrey 1995, p. 116-117; Palmer, Gardner & Stough 2003b).

The "transactional-transformational conceptualisation [of leadership was] derived from Burns (1978) and elaborated by Bass (1985)" (Bass, 1997, p. 130). Burns had argued that a transforming leader raised their consciousness, motivation on Maslow's (1954) hierarchy of needs, or moved them beyond self-interest (Bass, 1997, p. 133). The transactional-transformational paradigm views leadership as either

A matter of contingent reinforcement of followers by a transactional leader or moving of followers beyond their self-interests for the good of the group, organization, or society by a transformational leader (Bass, 1997, p. 130).

Masood, Dani, Burns & Blackhouse (2006) attribute Fiedler (1967) as the first researcher on the "importance of the leader, follower, and situation in the leadership process through his contingency model of leadership" (p. 944). They developed a leadership alignment model incorporating organisational culture, leadership style (transformational versus non-transformational), and situational strength (weak and strong situations affecting human behaviour). Transnational management (Bartlett & Ghoshal, 1992) promotes a top corporate executive (leader + talent scout + developer) working with three specialists: a business manager (strategy + architect + coordinator), country manager (sensor + builder + contributor) and functional manager (scanner + cross-pollinator + champion).

In exploring the relationship between transactional leadership and the ability model of emotional intelligence (Mayer & Salovey 1990) Palmer et al. (2000) found there were significant relationships between selected components of transformational leadership and emotional intelligence sub-scales:

Specifically, the inspirational motivation and individualized consideration components of transformational leadership were significantly correlated

with both the ability to monitor and manage emotions in oneself and others (Palmer et al. 2000; p. 8)

Palmer (2002) reported the increasing popularity of emotional intelligence as a measure of identifying potentially effective leaders and as a tool for developing effective leadership skills. Despite this popularity, Palmer said there was little empirical research to support this claim, and so set out to identify what emotional intelligence or interpersonal skills are required to become a leader. The results of this research have provided the basis for the first Australian test of emotional intelligence, the Swinburne University Emotional Intelligence Test (SUEIT), now recognised as Genos EI (Palmer 2003b, c; Palmer, Gardner & Stough 2003a).

Reporting on results from two Australian companies about their experience with emotional intelligence assessments, HR managers claimed a 70 percent behavioural change, getting buy-in for decisions, and seeing emotional intelligence as a predictor of a person's ability to take on more challenging leadership roles (Brown 2005).

Mayer et al. (2004a) reported findings of one study that tested 59 senior executives in a large firm to track which emotional intelligence skills may not be either central or necessary. They found that emotional intelligence may decline going up the corporate ladder. In other organisations, it was reported those lower in an organisation appreciated emotional intelligence in their supervisors. Another study (Garner & Stough 2001) reported customer relations may be favourably influenced by emotional intelligence. These results suggested that emotional intelligence positively contributes to job performance when the maintenance of positive personal commitments is important to success.

Cavallo (2004) reported on a study conducted by Johnson & Johnson to assess the importance of emotional intelligence in leadership success, which involved more than 1,400 employees in thirty seven countries. The study used an internal leadership competency scale and the Emotional Competency Inventory (ECI) to measure the emotional intelligence of employees. Cavallo held that emotional competence differentiates successful leaders. The study supported the

position that emotional competencies, including self-awareness, self-management capability, social skills, and organisational savvy, differentiates successful leaders (Cavallo & Brienza, 2004).

In a survey by the Hay Group (1999a) of the 'Most Admired' Fortune 500 companies across 24 industries, more than 60 CEOs and HR heads responded to a series of questions about the quality of their leadership and development programs. In answer to the question: 'How important do you feel social and emotional skills (emotional intelligence) is to success in your organisation's top leadership positions?' 100 percent of the 'Most admired' organisations agreed social and emotional skills were *very important* for success in top leadership positions in organisations.

The literature supported the view that emotional intelligence is effective for leadership education and development in organisations. Goleman (Dearlove 2003) emphasised

businesses need to pay attention to the role of emotional intelligence in outstanding leaders and to build it into their culture and systems ... Emotional intelligence was not touchy-feely stuff; that's a misconception. This is being intelligent about emotions, not being emotional' (Dearlove 2003, p. 32; see also Eisenberg 2002).

Power (2004) argued

Emotionally intelligent leadership is about exercising real choice, based upon a realistic and accurate assessment of oneself in a given situation, instead of being driven by one's emotions to act in an uncontrolled manner (Power 2004, p. 44).

#### **2.4.3d Team building**

In a report 'Nurturing emotional intelligence in university students', Professor Hang Chang Chieh (1999), Deputy Vice-Chancellor, National University of Singapore, determined

All university students should be urged to develop their EQs to match or even surpass their IQs...The mutually complementing roles of IQ and EQ

are crucial in teamwork. A team leader should have a high EQ if the team is to have a good chance to perform brilliantly. The high EQ leader would muster team members with high IQ and EQ and harness both these strengths to boost team performance (Hang 1999, pp. 3-4)

Druskat and Wolff (2001) suggested emotionally intelligent teams display the kinds of cooperation, commitment and creativity that are increasingly important for organisational effectiveness. They argued, 'The ability of a group to intelligently manage emotion plays an important role in its interaction processes and effectiveness' (Druskat & Wolff 2001, p. 133). Cherniss (2001) – in a proposed model that pointed to factors in organisations contributing to emotional intelligence – said, 'Emotional intelligence affects the quality of relationships ... ultimately any attempt to improve emotional intelligence in organisations will depend on relationships' (p. 7). He proposed that three interrelated organisational factors – leadership, HR functions and organisational climate and culture – influence emotional intelligence, and thereby organisational effectiveness, through its impact on relationships.

In a study of the influence practices of 207 middle-level staff in a high-tech US government agency (Waclawski 1999), the author concluded that the ability to establish strong, supportive relationships with both peers and superiors is one of the most important skills required. Where cross-functional teams are used, attention needed to be given to how individual member behaviours affect team members' perceptions.

Hay Group et al. (2001) studied executive teams at major international organisations. They established five conditions for top team success:

1. Establish a clear, compelling direction.
2. Create an appropriate structure.
3. Select the right people.
4. Support the top team.
5. Provide development.

The essential ingredient recognised for item three above was the ability to work with others; team members should bring emotional intelligence to the table. The Hay Group report revealed that emotionally intelligent people are capable of self-control, are adaptable and exude self-confidence and self-awareness. The research showed that on outstanding executive teams, two attributes in particular distinguished members from those who served on less capable teams: empathy and integrity.

### **2.4.3e Appraisal**

In a study on a group of 100 British managers participating in HMC courses, Henley Management College (HMC) researchers, Dulewicz and Higgs, were able to show a strong correlation between rapid career progression and a combination of emotional intelligence and high IQ (Exley 2000). In building a case for how emotional intelligence contributes to the bottom line of an organisation, Cherniss (2004) reported on two cases associated with appraisal:

1. One of the foundations of emotional competence – accurate self-assessment – was associated with superior performance among several hundred managers from 12 different organisations (p. 3).
2. The most successful debt collectors in a large debt collection agency had an average goal attainment of 163 percent over a three-month period. They were compared with a group of collectors who achieved an average of only 80 percent over the same time period. The most successful collectors scored significantly higher in the emotional intelligence competencies of self-actualisation, independence, and optimism (p. 4).

### 2.4.3f Training

Cherniss (2004), in building a case for how emotional intelligence contributes to the bottom line of an organisation, reported on one case associated with training:

Financial advisors at American Express whose managers completed the emotional competence-training program were compared to an equal number whose managers had not. During the year following training, the advisors of trained managers grew their business by 18.1% compared to 16.2% for those whose managers were untrained (p. 4).

Other organisations reported significant benefits from the incorporation of emotional intelligence in training. The Chartered Management Institute in the UK believed that 'Certain innate skills can be developed; additionally, self-awareness can be increased, strengths exploited, weaknesses minimised' (Viewed 5 May 2005, <http://www.managers.org.uk/institute/>). In Australia, the ANZ, National Australia Bank and Telstra, are taking EQ into consideration as part of their recruitment and training (Nader 2003). Henley Management College recognised that there are no 'quick fixes' but training can give you insight into your emotional intelligence abilities (Lucas 2000).

A common complaint on newly promoted leaders was that they lacked empathy. People were promoted because they were outstanding individual performers, but being a solo achiever doesn't teach you the skills necessary to understand other people's concerns. Far better that leaders receive training guidance and support and a specific development plan in the workplace to assist with learning (Goleman 2004).

In an article titled 'The war for talent', *The McKinsey Quarterly*, Chambers et al. (1998) examined talent problems faced by 77 companies from a variety of industries. The authors argued,

You can win the war on talent, but first you must elevate talent management to a burning corporate priority. Then, to attract and retain people you need, you must create and perpetually refine an employee value proposition: senior management's answer to why a smart, energetic, ambitious individual would want to come and work with you rather than

with the team next door. That done, you must turn your attention to how you are going to recruit great talent, and finally develop, develop, develop (Chambers et al. 1998, p. 46)

Several additional authors have argued for emotional intelligence training and development, as emotions are integral to our biological makeup. Studies in close to 500 organisations worldwide indicate that people who score highest on EQ measures rise to the top of organisations Caudron (1999). Cultural intelligence as it relates to emotional intelligence needs further examination (Earley and Mosakowski 2004). Accumulating evidence suggested that emotional intelligence, measured as ability, predicts a variety of important outcomes (Mayer et al. 2004a). Emotional intelligence and its appropriate application can be learned. Goleman said,

Unlike IQ – which some argue doesn't change throughout life – emotional intelligence can be developed. It's a neurological fact that the brain is plastic throughout life; brain structures and circuits shape themselves through repeated experience (cited in Lambert 1998, p. 5).

*The Australian Financial Review* reported on an Australian survey of 80 employees from four organisations which measured the correlation between levels of emotional intelligence and employee performance factors, including stress, job satisfaction, work/family conflict and organisational commitment. The study showed emotionally intelligent workers were more committed to their work, get more satisfaction from the job and were more likely to stay with an organisation longer. The report concluded that training people to be more emotionally intelligent was possible (Fox 2003).

### **2.4.3 Summary**

Against the case for the use of emotional intelligence measures for the purposes of occupational and career assessment, job performance and satisfaction, coping with occupational stress, and the effectiveness of EI-based training programs, were Matthews et al. (2002, pp. 504-509) who complained of:

1. A litany of 'unsubstantiated generalizations' regarding the role of emotional intelligence in the workplace. 'For example, "All emotional competencies can be cultivated with right practice"' (Goleman 1998a, p. 284),
2. The illegitimacy of many competencies and skills discussed under occupational contexts claiming to be constructs under the ability model of emotional intelligence. Instead these are better characterised as 'motivational variables ... personality variables ... character traits ... or general management skills', and
3. The reliance on anecdotal, as against empirical, evidence to support the use of emotional intelligence measures in the workplace (Matthews et al. 2002, pp. 504-509).

Others (Zeidner, Matthews & Roberts 2004) indicated that there was too much hyperbole and an over reliance on anecdotal case studies on the usefulness of emotional intelligence in the workplace. Some (Matthews et al. 2002) believed a major difficulty was that tests of emotional intelligence may, in fact, be assessing several conceptually different types of construct that should be distinguished.

Of the future for emotional intelligence, Mayer's view is preferred, 'The real live facts of emotional intelligence are quite encouraging – that is, it does seem to predict important outcomes' (Mayer 2005).

The literature on emotional intelligence argued strongly that emotional intelligence influenced organisation effectiveness and predicted important life criteria. Overwhelmingly, the research literature reviewed argued that training in emotional intelligence – including cultural knowledge – is essential to an organisation's employee value proposition

## **2.5 Directions for future research**

This review on the literature of emotional intelligence pointed to areas for future research on emotional intelligence. Table 2.2 presents a brief summary of specific areas for research identified by authors in the field. The entries have been organised by year of publication and principal author surnames.

Results from research to date indicate emotional intelligence does play some role in everyday life (Mayer, Caruso & Salovey 1999; Mayer 2005). It is argued that ability measures (performance-based) would reveal emotional intelligence to be better characterised by a pattern of underlying strengths and weaknesses across various skills than by a monolithic emotional quotient (EQ) (Salovey 1999). Cultural intelligence is a factor not mentioned extensively in literature regarding emotional intelligence, but it is something that needs to be embraced in the various models measuring emotional intelligence.

It was suggested that to become an emotionally intelligent leader, a person needed to review his/(her) leadership style and get an assessment of his emotional intelligence (Bernhut 2002). More research needed to be conducted to test further the relationship between emotional intelligence and both mood and self-esteem (Schutte et al. 2002) and claims of the relative importance of emotional intelligence compared to traditional forms of intelligence need to be researched fully (Emmerling & Goleman 2003).

Research had demonstrated that emotional intelligence was distinct from personality dimensions, such as the Big Five dimensions (see Digman 1990; Mayer 1998 for a discussion on the Big Five dimensions of personality). Future research in emotional intelligence should investigate the relationship between emotional intelligence and criterion variables other than job performance, such as psychological well-being and occupational stress experienced by workers. For if emotional intelligence is related to job performance, developing effective emotional intelligence training and testing the predictive power of it on job performance – as compared with general mental abilities – could also be a research direction (Law, et al., 2004; Palmer, Gardner & Stough 2003b).

Literature revealed that a clearer conceptualisation of emotional intelligence is required '... to discriminate conceptually distinct domains and develop coherent measures within each domain' (Matthews et al. 2002, p. 531). Other authors pointed out their focus has been on the 'broader issues of EI: What it is and what it predicts' (Mayer et al. 2004a, p. 211, 254) and listed priorities for future research on emotional intelligence to include the developmental aspects of emotional intelligence to better understand human behaviour in relationships. These and other questions are unanswered and remain for future research.

Table 2.2 – Summary of directions for future research on emotional intelligence

Salovey & Mayer (1990)	Mayer, Caruso & Salovey (1999)	Salovey (1999)	George (2000)
1. Identification of emotionally intelligent individuals	1. Factor analysis of emotional intelligence	1. Address the independence of emotional intelligence from analytical (traditional) intelligence and cultural differences in the definition of emotional intelligence competencies	1. Explore ways in which emotional intelligence may contribute to leader effectiveness
2. Examination of the acquisition of emotionally intelligent skills and interventions to promote them	2. Understanding the measurement of emotional intelligence as an ability model		2. Complete studies in laboratory settings or in management simulations using the MSCEIT to measure the emotional intelligence levels of research participants
3. Understanding the role of emotional intelligence in fostering a healthy personality and close relationships	3. Study claims as to whether emotional intelligence accounts in some large part for individual success		

*table continues*

Table 2.2 – Summary of directions for future research on emotional intelligence

Zeidner, Matthews & Roberts (2001)	Caruso, Mayer & Salovey (2002)	Palmer, Gardner & Stough (2003b)	Law, et al. (2004)
1. Settle on a clear definition for the construct of emotional intelligence	1. Relation of EI to actual behaviour with objective measures being the preferred basis in	1. More research is needed in order to substantiate and better understand the role EI plays in	1. Investigate the relationship between EI and criterion variables other than job
2. Establishment of convergent and divergent validity of EI measures across different populations	assessing emotional abilities	various aspects of working life	performance, such as psychological well-being and occupational stress experienced by workers
3. Look at the independent contribution of EI to emotional adaptation	2. Identify a specific emotional deficit or strength in emotional perception, facilitation, understanding or management, to become the focus of a treatment plan		

*table continues*

Table 2.2 – Summary of directions for future research on emotional intelligence

Mayer, Salovey & Caruso (2004a, b)	Mayer, Salovey & Caruso (2004a, b)	Mayer, Salovey & Caruso (2004a, b)	Palmer, Gignac, Manocha & Stough (2005)
1. Learning what EI predicts	5. Expanding EI measurement to a wider range of age groups to better understand its development course	7. The study of EI as a hierarchy of skills, and of the developmental nature of EI, and of EI as a variable in clinical studies	1. Addition of valid item to the current subscales, as well as the creation of more subscales in general, could be argued to be the necessary next step in the development of the MSCEIT
2. Understanding how EI relates to other intelligences & personality traits			
3. Understanding the processes underlying EI	6. The utility of examining the distinctive behaviours of high and low MSCEIT scores	8. Examining whether people high on the MSCEIT really can, relative to others, better resist criticising a friend in the face of temptation to do so	
4. Determining whether teaching emotional knowledge has a desirable effect on behavioural outcomes and might change EI itself			

*Note.* Information in this table is necessarily succinct. Readers are encouraged to consult the original source for specific details.

## 2.6 Research questions

This review of the literature on emotional intelligence has shown emotions inform our intelligence in a biological model – recognised as emotional intelligence – which predicts important outcomes for organisation success and individual performance. When emotional intelligence is learned and nurtured by people, it influences positively not only their intrapersonal behaviour, but also interpersonal relationships in the workplace. The three research questions set to explore this topic, and the instruments used to examine them, are at table 2.3.

The first research question for this study was to measure the emotional intelligence of managers in Singapore using the MSCEIT – something not done before. The lack of quantitative and qualitative findings on the emotional intelligence of managers in Singapore prompted this study of psychometric tests of managers who agreed to complete the MSCEIT. Thus, this study identified emotionally intelligent individuals and measured the emotional intelligence of a wide range of age groups and cultures to better understand its development course and provide data for a national Singapore norm on emotional intelligence.

The second research question explored perceptions of managers and senior executives of organisations in Singapore on the influence of emotional intelligence in organisations. This question was exploratory in that it sought to examine the extent of support and commitment by managers and senior executives in Singapore organisations for the notion, established in the literature, that emotional intelligence was a proprietary means for predicting organisation effectiveness, before deciding on additional testing.

The last research question examined the opinions of managers and senior executives in Singapore to provide a better understanding of the perceptions of managers and senior executives, as to how emotional intelligence fosters individual performance, effective leadership and close relationships in organizations, and was preliminary to more rigorous analysis of emotional intelligence and the individual performance of managers in Singapore.

Table 2.3 - Research questions and the instruments used to examine them

RESEARCH QUESTION	Managers' Perceptions	Executives' Perceptions
<p>1a How emotionally intelligent are managers in Singapore?</p> <p>b Is there a difference between the emotional intelligence abilities of local and Western managers in Singapore?</p>	<p>Measured by the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test</p>	
<p>3 What is the influence of emotional intelligence on organisation effectiveness in Singapore?</p>	<p><b>Questionnaire:</b> In the opinion of managers of corporations in Singapore: [Appendix A5 – Research Questionnaire]</p> <p>(i) Does emotional intelligence play a role in increasing the competence of people at all levels to enable organisations to compete in world markets? [Q3a]</p> <p>(ii) To what extent should their companies assist managers to increase their knowledge of emotional intelligence? [Q3b]</p> <p>(iii) Have their companies been successful implementing emotional intelligence programs in the workplace? [Q3c]</p> <p>(iv) Have there been sufficient opportunities for managers to increase their emotional intelligence in the workplace? [Q2]</p> <p>(v) Should companies establish emotional intelligence as a corporate priority? [Q8a]</p>	<p><b>Executive interviews:</b> In the opinion of senior executives of corporations in Singapore:</p> <p>(vi) Is emotional intelligence established in corporate culture?</p> <p>(vii) Is the emotional intelligence of managers recognised as adding economic value to their business?</p>

RESEARCH QUESTIONS	Managers' Perceptions	Executives' Perceptions
3 How important do you feel emotional intelligence is in the workplace for:  g. Star performance?	<b>Questionnaire:</b> In the opinion of managers of corporations in Singapore:  (i) Do star performers in the workplace exhibit emotional intelligence? [Q4] (ii) Is emotional intelligence important for star performance in the workplace? [Q5]	<b>Executive interviews:</b> In the opinion of senior executives of corporations in Singapore:
h. Selection?	(i) What significance do companies give to emotional intelligence in their search for talent? [Q7]	(ii) Are managers tested for emotional intelligence in corporate staff selection, appraisal, promotion, and retention assessments?
i. Leadership?	(i) Is emotional intelligence important for leadership? [Q8d]	
j. Team building?	(i) Is emotional intelligence important for team building? [Q8d]	
k. Appraisal?	(i) Is emotional intelligence important for promotion? [Q8e]	
l. Training?	(i) Should companies provide opportunities in the workplace for managers to increase their knowledge about emotional intelligence? [Q8b] (ii) Should companies meet the cost of training for emotional intelligence? [Q8c] (iii) Do managers allow staff time off to study emotional intelligence? [Q8f] (iv) Do managers generally show little or no interest in learning about emotional intelligence? [Q8g] (v) Do managers feel that emotional intelligence is a passing 'fad'? [Q8h]	(vi) Is the development of emotional intelligence of managers a corporate priority in staff training?

## Chapter 2 – Literature Review

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## CHAPTER 3

### METHODOLOGY

Chapter three presents a description of the participants, materials, data collection procedures, scoring and analysis methods, and reliability. Details of the external online MSCEIT (Mayer, Salovey, Caruso Emotional Intelligence Test) psychometric instrument, project questionnaire, and executive interview structure used for data collection and analysis are discussed. The chapter then presents the rationale, development, and utility of *EASEQuadrant*, the author's new theoretical model for profiling (classifying and interpreting) an individual respondent's emotional intelligence quotient (EIQ) area scores measured by the MSCEIT. The author's new theory of Emotional Leadership Practice (ELP) is introduced to place *EASEQuadrant* in context. Finally, the chapter sets out data sets and analysis, including descriptive statistics, content, thematic, and qualitative analysis, which support the results (chapter 4) of this study.

#### 3.1 Participants

A total of 1,573 prospective research participants, managers in Singapore, were invited to join the study. The breakdown of the 1,573 is as follows:

Of these, 533 prospects (34%) were selected at random from names of managers listed in two local newspapers and one business magazine reporting on the activities of managers in Singapore – The Straits Times, The Sunday Times, and IT Singapore.

An additional 1,000 (64%) prospects were invited to participate in the study from the members of two professional bodies in Singapore – The Chartered Management Institute (32%) and CPA Australia Singapore Division (32%), a professional accounting body. As membership records of these organisations are not in the public domain, it was left to the management of the respective bodies to invite prospects to participate from members who held positions in management.

As the response rate was initially low at 6.1% (this improved later to 8.8%) it was decided to obtain additional data from 40 managers attending a two-day training programme constructed by the author for the study.

To provide a triangulation of data, seven executive interviews were conducted with six Chief Executive Officers and one Human Resource Manager from seven companies in Singapore (Details of these interviewees are found at Appendix C.2).

The final sample (N=139) of respondents, plus seven executive interviews, is a captive sample drawn from men and women who are managers resident in Singapore. The respondents were asked to nominate their nationality: local (Singaporean Citizen/Permanent Resident) or expatriate (Australasian, South Asian, East Asian, Middle Eastern, African, European, North American, South American, and Pacific Islander) managers (Appendix A.3). As an exploratory study, the author considers that sufficient data has been obtained from external sources to be able to draw conclusions for this thesis.

All respondents were resident in Singapore at the time they completed the questionnaire, online emotional intelligence test, and executive interviews. All testing was conducted in English.

### **3.2 Procedure**

Data were collected using three instruments; (1) the online MSCEIT emotional intelligence test (section 3.3), (2) the research questionnaire (section 3.4), and (3) executive interviews (section 3.5). Quantitative data was analysed using descriptive statistics (Sekaran 1984/1992). *EASEQuadrant* profiling (section 3.7) was used to classify and interpret data collected using the MSCEIT. Content analysis (Insch et al. 1997) and thematic analysis (Aronson 1994; Kabay 2006 ) (section 3.6) was used for conceptual and relational analysis of text collected in semi-structured executive interviews (Sekaran 1984/1992).

Each prospective research participant was sent:

1. Invitation to participate in the study – Appendix A.1
2. Individual consent form – Appendix A.2
3. Personal information sheet – Appendix A.3
4. Project information sheet – Appendix A.4
5. Research questionnaire – Appendix A.5

Items 1 and 4 above were to foster interest in the project, provide background information on the researcher, and details of how to complete the research questionnaire and online emotional intelligence test. Items 2 and 3 were requirements of the Human Research Ethics Committee of the University of South Australia. Item 5 provided data for analysis in this study.

### **3.2.1 MSCEIT online emotional intelligence test data collection**

This thesis explores how emotionally intelligent managers are in this sample in Singapore, as measured using the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer et al. 2002b; Appendix B.1). Data received from the MSCEIT online emotional intelligence tests (section 3.3), provided direct answers to research questions 1a and 1b.

In the introductory letter to respondents (Appendix A.1), participants were asked to complete the online emotional intelligence test – the MSCEIT – electronically using the Internet. Respondents were provided the Internet address (URL), logon ID and Password to complete the MSCEIT online. Once completed the MSCEIT tests were scored by the copyright holder, Multi-Health Systems, Inc. (MHS) <www.mhs.com>, in Toronto, Canada, a Canadian psychological test publishing company, and individual respondent results emailed to the author, who is authorised and accredited by MHS to administer the test.

The names and ages of respondents were captured by MHS from the MSCEIT online test. This data enabled the author to match details of respondents on personal information sheets received independently of research questionnaires with MSCEIT test results to provide analysis on the dependent variable (emotional intelligence scores) and independent demographic state of the dependent variable – sex, age, education, management level, and nationality.

### **3.2.2 Questionnaire data collection**

Data received from the research questionnaire (section 3.4) provided answers to research questions 2 and 3.

Respondents were also asked in the introductory letter (Appendix A.1) to return their completed research questionnaires independently of the personal information sheet and signed consent form, to ensure confidentiality of the returned questionnaires. As individual questionnaire data was received anonymously, no matching of scores was possible and no demographic analysis was conducted on questionnaire data.

### **3.2.3 Executive interview data collection**

Data received from seven executive interviews (section 3.5) provided direct answers to research questions 2(vi), 2(vii), 3b(ii) and 3f(vi) and informs the general discussion in this thesis.

Seven one-hour executive interviews were conducted by the author with six Chief Executive Officers and one Human Resource Manager from seven companies in Singapore. Details of the individuals interviewed and the companies they represent are found in Appendix C.2. Each interview was taped and transcribed by the author onto hard copy. A brief record on the interview not taped was compiled by the author. Content analysis (Insch, Moore & Murphy

1997) and thematic analysis (Aronson 1994; Kabay 2006) (section 3.6) was conducted on all transcripts of executive interview responses.

### **3.3 MSCEIT – MAYER-Salovey-Caruso Emotional Intelligence Test**

#### **3.3.1 Description of the MSCEIT and its measure**

As stated earlier in this section, data received from the MSCEIT online emotional intelligence tests provided answers to research questions 1a and 1b.

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT – pronounced "Mes-keet") Version 2.0 by Dr John (Jack) D. Mayer, Dr Peter Salovey & Dr David Caruso, Copyright © 1999, 2000, Multi Health Systems, Inc. (MHS), Toronto, Canada, (Mayer, Salovey & Caruso, 1999, 2000, 2002b) is designed to assess emotional intelligence. It is a performance scale: that is, it measures how well people *perform tasks* and *solve emotional problems*, rather than a self-report test; simply asking them, for example, about their subjective assessment of their emotional skills. The MSCEIT was developed from an intelligence-testing tradition that was substantially informed by the emerging scientific understanding of emotions and their function (Mayer et al. 2002b, p. 1).

A fuller description of the MSCEIT and what it measures is at Appendix B.1. The MSCEIT Item Booklet is at Appendix B.2. Approval letters received from MHS authorising the use of the MSCEIT in this study, dated 6 September 2000 and 5 January 2001, are at Appendix B.3. The MSCEIT user's manual (Mayer, Salovey & Caruso 2002b) is available from MHS.

The MSCEIT is an ability test of emotional intelligence designed for adults aged 17 years and older. The MSCEIT requires test takers to answer 141 items forming a four branch model of emotional intelligence:

5. **Identify** the emotions expressed by a face or in landscapes or designs.
6. **Generate** a mood and solve problems with that mood.

7. *Define* the causes of different emotions. Understand the transition and progression of emotions.
8. *Determine* how to best include emotion in our thinking in situations that involves ourselves or other people.

Answers to the 141 MSCEIT items are transmitted electronically to the test publisher and yield five scores: a total emotional intelligence quotient (EIQ) score, two area scores (Experiential and Strategic), and four branch scores corresponding to the four branch ability model of emotional intelligence – perceiving, facilitating (using), understanding, and managing emotions (Mayer & Salovey 1997). An additional eight task-level scores are reported for research and qualitative use only. Most respondents take between 30 and 45 minutes to complete the MSCEIT Version 2.0. It is ideally administered in its entirety.

MSCEIT answers are evaluated in terms of agreement with a general scoring normative sample of 5000, mostly from research sites in the United States of America (general consensus scoring) or a sample of 21 emotion experts (expert scoring), which closely converge (Mayer et al. 2002b, p. 33). In this study, general consensus scoring was used.

### **3.3.2 Support for use of the MSCEIT V2.0**

Brackett & Mayer (2003) used the MSCEIT Version 2.0 to test participants (N=202) in a study of the convergent, discriminant, and incremental validity of an ability test of emotional intelligence – the MSCEIT – and two self-report measures of emotional intelligence – Bar-On's Emotional Quotient Inventory (EQ-i) and the self-report emotional intelligence test (SREIT).

Palmer (2003a) tested participants (N=451) using the MSCEIT Version 1.1, although scores were presented according to the shorter MSCEIT V2.0 to produce representative data. Palmer concludes that '... the MSCEIT has improved over its predecessor measure the MEIS with respect to the validity of its scoring protocols, reliability, and factor structure' (p. 53).

### 3.3.3 Reliability of the MSCEIT V2.0

Mayer and colleagues have designed and tested the reliability of their ability based measures of emotional intelligence (Mayer et al. 1990; Mayer et al. 1999; Mayer et al. 2002b; Brackett & Mayer 2003; Mayer et al. 2003).

As reported in the MSCEIT user's manual (Mayer et al. 2002b), split-half reliability coefficients for the four branches of the MSCEIT range from  $r = .77$  to  $.90$  and a full scale reliability of  $.91$ . Brackett & Mayer (2003) found the test-retest reliability of the MSCEIT was very high,  $r = .86$ . Palmer (2003) found the split-half reliabilities for full-scale (overall emotional intelligence) and area and branch scores of the MSCEIT V2.0 to be reliable. Matthews et al. (2004, p. 187) report that Mayer-Salovey-Caruso's '... most recent test, the MSCEIT, shows good scoring reliability across different methods'.

In their brief report on the MSCEIT V2.0 Mayer et al. (2003) reported that the MSCEIT full-test split-half reliability is  $.93$  for general and  $.91$  for expert consensus scoring. The two area scores are between  $.86$  and  $.90$  and four branch scores range between  $r = .76 - .91$ . They conclude that those who use the MSCEIT V2.0 can feel more confident about the quality of the measurement tool to assess emotional intelligence. Reliabilities for Branch, Area, and Total test scores of the MSCEIT were reasonably high, with reliabilities for the individual task-level scores ranging lower. Differences in results between the general consensus sample (2,112 members) and expert consensus sample (21 members) was apparent, but so were similarities.

The 21 experts in this study did exhibit superior agreement levels relative to the general sample. At the same time, the expert and general consensus criteria often agreed on the same answers as correct ( $r = .91$ ). Participants' MSCEIT scores were also similar according to the two different criteria ( $r = .98$ ) (Mayer et al. 2003, p.104).

In this study individual MSCEIT test raw data was scored according to the MSCEIT Version 2.0 general consensus scoring method (Mayer et al. 2002b, p. 33). A comparison of the Singapore sample MSCEIT scores and the American

normative sample general consensus MSCEIT V2.0 scores is provided in this thesis (section 5.2.4).

In a recent study of the psychometric properties of the MSCEIT V2.0 (Palmer et al. 2005) it was found that the factor structure of the MSCEIT V2.0 did not appear to reflect the four-factor model postulated by Mayer and Salovey (1997) and ostensibly demonstrated empirically in Mayer et al. (2003). It was also found that age related criteria of MSCEIT V2.0 was not supported. Reliability of the MSCEIT was considered consistent although some revising of MSCEIT subscales aimed at establishing acceptable internal consistency reliability across all subscales may be required. Questions arising on factor analysis raised by Palmer et al. (2005) and Gignac (2005) were partially addressed by the authors of the MSCEIT (Mayer, Panter, Salovey, Caruso & Sitarenios 2005) who alluded to changes to algorithms in software as a possible contributor to changed psychometric results. Additionally, Mayer et al. (2003) acknowledged the lack of reliability within task scores and recommended use of the Total, Area level, and Branch level scores only. Palmer et al. (2005) suggest that only Strategic Area scores and three of the four Branch scores be calculated and interpreted. However, such ongoing discussion amongst the various authors of models of emotional intelligence as to which model best supports the idea of a unitary emotional intelligence does not, in the author's view, invalidate conclusions reached for this thesis.

### **3.4 Research Questionnaire**

The complete research questionnaire is at Appendix A.5. The questionnaire contained nine questions and covered 42-items about emotional intelligence. As stated earlier in this section, data received from the research questionnaire provided answers to research questions 2 and 3.

It was desirable to provide respondents with a range of questions in the questionnaire in order to gauge their opinions (their subjective assessment) on the influence of emotional intelligence on organisation effectiveness and importance for

individual success. The questionnaire contained nine questions and covered 42-items about emotional intelligence; how managers saw star performers viewing emotional intelligence, managers' perceptions of emotional intelligence, and how the senior executives of companies and organisations in Singapore view emotional intelligence in the work place.

### **3.4.1 Organisation of questions**

1. Overview – Q1 was to establish what the respondent understood by the term, emotional intelligence. Q6 and Q9 were to gauge the importance and significance that respondents placed on emotional intelligence. Data from Q1, Q6 & Q9 (Appendices E.1 – E.3) was reviewed to find a suggested overall meaning.
2. Frequency analysis and calculation of means and standard deviations for description and comparisons was conducted on Q2, Q3, Q4, Q5, Q7, and Q8.
3. As discussed in chapter 2, the literature on emotional intelligence divides between the development of a performance-based measures of emotional abilities (e.g., the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test) and self-report measures of emotional competencies or traits (e.g., the Bar-On EQ-i: Emotional Quotient Inventory, Genos EI). In reporting on results from the research questionnaire, it is important to note that in questions Nos. 4, 5, and 7 of the research questionnaire (Appendix A.5), the researcher wanted to obtain data specifically in regard to emotional intelligence mental abilities and emotional competencies. Hence, parts a-d of questions Nos. 4, 5, and 7 were framed on the four branches of the abilities model of emotional intelligence (Mayer & Salovey 1997) and parts e-i of questions Nos. 4, 5, and 7 were formulated on the emotional competency model of emotional intelligence (Bar-On 1997) as set out in table 4.10.

Table 4.10 – Emotional abilities versus emotional competencies

a. Ability to identify emotion	Mental Ability
b. Use of emotion to improve thinking	Mental Ability
c. Ability to recognize emotional chains	Mental Ability
d. Managing emotion in oneself & others	Mental Ability
e. Ability to assess oneself realistically	Emotional Competency
f. Controlling one's feelings and impulses	Emotional Competency
g. Achieving for the sake of achievement	Emotional Competency
h. Nurturing and developing employees	Emotional Competency
i. Effectiveness at managing relationships	Emotional Competency

In presenting the results of the research questionnaire, questions *Nos. 4(h) (table 4.17) and 5(h) (table 4.18)* are omitted, as respondents did not answer them. Results from question *7(h) (table 4.19)* are included.

### 3.4.2 Detailed analysis of questions

Q1 Understanding the term – Emotional Intelligence (EI): Open ended question.

*Q1 provides the opportunity for a respondent to detail his or her understanding of EI. Q1 informs research question 2.*

Q2 Opportunities to increase EI in the work place: Five-point scale: (1) definitely not enough, (2) probably not enough, (3) about right, (4) probably enough, or (5) definitely enough.

*Q2 provides an assessment by respondent's of the availability of opportunities for improving their EI at work. Q2 informs research question 2(iv).*

- Q3a Role of EI increasing competence of people: Five-point scale, where 1 equals 'Not at all' and 5 equals 'To a great extent'.

*Q3a is the respondent's view of the importance of EI in increasing competency in the work place. Q3a informs research question 2(i).*

- Q3b Desire for companies to assist employees increase their EI: Five-point scale (as in Q3a).

*Q3b is the respondent's view of the degree of willingness of companies to help employees increase EI. Q3b informs research question 2(ii).*

- Q3c Company's efforts to implement EI in the work place: Five-point scale, where 1 equals 'Not significant' and 5 equals 'Very significant'.

*Q3c is the respondent's view of the degree of implementation of EI in the work place. Q3c informs research question 2(iii).*

- Q4 How star performers in their work place view the importance of EI: Five-point scale, where 1 equals 'Not important' and 5 equals 'Very important'.

*Q4 is the respondent's view of how star performers view the importance of EI in the work place. Q4 answers research question 3a(i).*

- Q5 Respondent's view of the importance of EI in their work place: Five-point scale, where 1 equals 'Not important' and 5 equals 'Very important'.

*Q5 is the degree of importance the respondent places on EI. Q5 informs research question 3a(ii).*

- Q6 Other factors contributing to star performance: Open ended question.

*Q6 explores the respondent's view on significance of factors for star performance. Q6 informs research question 3a(i) and (ii).*

- Q7 Significance of EI factors in search for talent: Five-point scale, where 1 equals 'Not significant' and 5 equals 'Very significant'.

*Q7 is the respondent's opinion of the degree of importance companies and organisations give to EI in their search for talent. Q7 informs research question 3b(i).*

- Q8 Companies' priority and managers' beliefs in fostering EI in the employee value proposition: Five-point scale, where 1 equals 'Strongly disagree' and 5 equals 'Strongly agree'.

*Q8 considers the significance given by companies and organisations in Singapore to factors in support of EI as a part of their employee value proposition. Q8 informs research questions 2(v) and 3c-e.*

- Q9 Factors not included in questionnaire: Open ended question.

*Q9 is probing further the respondent's views on EI. Q9 informs the general discussion in this thesis.*

### **3.5 Executive Interviews**

As stated earlier in this chapter, data received from the executive interviews informs research questions 2(vi), 2(vii), 3b(ii) and 3e(vi) and informed the general discussion in this thesis.

#### **3.5.1 Objective of executive interviews**

The objectives of the executive interviews were to:

1. Get an understanding of how each organisation or company recognised emotional intelligence in star performers – Did the organisation or company recognise emotional intelligence (EI) in their top people?

2. Enquire about the priority each organisation or company gave to emotional intelligence in selecting and retaining talent – Does the organisation or company use EI for selecting and retaining top talent? Are there emotional competencies and abilities that the companies measure?
3. Gain an appreciation of the level of resources each organisation or company allocates to emotional intelligence now and in the future – What priority does the organisation or company give to EI in its training programs and what resources does it allocate for EI now and plan to in the future?
4. Obtain the view of the Chief Executive Officer or Human Resource Manager as to how emotional intelligence is seen in the organisation's industry and by government in Singapore – What is your experience within your industry and government in Singapore as to the extent of implementation of EI in organisations or companies in Singapore?

### **3.5.2 Conduct of executive interviews**

Executive interviews were conducted with six Chief Executive Officers and one Regional Human Resource Manager of corporations in Singapore to obtain detailed information and a wider picture of how emotional intelligence was being applied and implemented in Singapore companies.

Invitations (Appendix C.1) to join this study through face-to-face personal executive interviews with the author were sent to 15 Chief Executive Officers and Human Resource Managers. The identification of these executives was at random using the author's local knowledge, newspapers, and contacts in industry, but recognition was given to organisational size and a representation across industries. Interviews were confirmed by email and telephone exchanges with respondents and/or their secretaries.

Seven executives – six Chief Executive Officers and one Regional Human Resource Manager – agreed to be interviewed; from the oil and gas, resource, insurance, securities, human capital, information technology, and mining industries, and one large government hospital. The names of interviewees and organisations are at Appendix C.2.

Each interviewee was provided a background to the study, which included preliminary verbal results from the researcher's questionnaire (Appendix A.5), and asked to complete an executive interview questionnaire (Appendix C.4). As only two of these questionnaires were completed and returned to the researcher by the executives interviewed, no formal analysis on these questionnaires was conducted due to limited data. A future study on the emotional intelligence of managers in Singapore would benefit from using this prepared questionnaire.

Each executive interview conducted by the author was between one hour and one and a half hours. Sekaran (1984/1992) refers to structured interviews as those 'conducted by the interviewer when he or she knows exactly what information is needed and has a predetermined list of questions that will be posed to the respondents' (p. 192). The interviews for this study were semi-structured interviews with an interview guide comprising four questions (see below) to permit the perceptions of the interviewees to surface as well as to gain specific answers to questions. To facilitate this, a rapport was built with each interviewee at the commencement of the interview through a few minutes of social chat. Sekaran (1984/1992) argues that, 'The **interviewer** could bias the data if proper trust and rapport are not established with the interviewee' (p, 193). Each interviewee was asked to respond to the following questions:

In the opinion of senior executives of corporations in Singapore,

1. Is emotional intelligence established in corporate culture? – Research Question: 2(vi).
2. Is the emotional intelligence of managers recognised as adding economic value to their business? – Research Question: 2(vii).

3. Are managers tested for emotional intelligence in corporate staff selection, appraisal, promotion, and retention assessments? – Research Question: 3b(ii).
4. Is the development of emotional intelligence of managers a corporate priority in staff training? – Research Question 3e(vi).

The quotations in this research paper are taken from these interviews.

The researcher taped seven of the interviews and later transcribed them onto hard copy. The results of these interviews were analysed using:

1. Content analysis – a method for analysing written and oral textual materials (Insch, Moore & Murphy, 1997); and
2. Thematic analysis – a method of analysing informants' talk about their experiences once information has been collected (Aronson, 1994).

### **3.6 Content and thematic analysis procedure**

#### **a. Content Analysis**

Insch et al. (1997) provide a comprehensive 11 step suggested procedure for using content analysis based on work by other researchers in the field (Weber, Krippendorff & Merritt). Colorado State University (CSU) provides a complete guide on content analysis at <http://writing.colostate.edu/guides/research/content/index.cfm>. Colorado State University's writing guide on content analysis sets out eight steps for conducting conceptual analysis and eight steps for conducting relational analysis of text.

Content analysis in this project was conducted manually on executive interview data in eight steps, using a combination of procedures outlined by Insch et al. (1997) and CSU and adapted by the author for the small sample size, combining conceptual and relational analysis. As interview data was limited to 50 x A4 pages at font size 12 and 1.5 line spacing (approximately 23,000 words

## Chapter 3 – Methodology

including the author's questions), no descriptive research was completed on this data.

The eight step content analysis procedure followed in this project is as follows:

### *Step 1 – Identify the research questions*

Content analysis informs research questions 2(vi), 2(vii), 3b(ii) and 3e(vi) and informs the general discussion in this thesis

### *Step 2 – Identify texts to be examined*

Seven transcribed audio recordings – The transcripts for all seven recordings totalled 50 A4 pages at font size 12 and 1.5 line spacing (approximately 23,000 words including the author's questions).

### *Step 3 – Decide the unit of analysis*

Data were analysed for the presence of important words and phrases (keywords).

### *Step 4 – Decide how many categories (concepts) to code for*

Recall that the literature on emotional intelligence divides between the development of a performance-based measures of emotional abilities and self-report measures of emotional competencies or traits (see item 3.4.1). Therefore, data were analysed in nine emotional intelligence (EI) categories; items 1–4 being emotional abilities (Mayer et al. 1997), and items 5–9 emotional competencies (Goleman 1998b):

1. Perceiving emotion – ability to identify emotions.
2. Using emotion – ability to use emotion in thought.
3. Understanding emotion – ability to recognise chains and blends.

4. Managing emotions – ability to manage emotion in oneself and others.
5. Self-awareness – assessing realistically one's moods and emotions.
6. Self-regulation – Controlling one's feelings and impulses.
7. Motivation – Achieving for the sake of achieving.
8. Empathy – Nurturing and developing employees.
9. Social skill – effectiveness at managing relationships.

*Step 5 – Generate a sample coding scheme*

Data were analysed for both existence and frequency of a concept relevant to emotional intelligence. Keywords were coded to reflect the nine categories in step 4. Standardised Australian English spelling was applied with alternate ways (variants or derivatives) of writing the same word (plural or singular, verb or noun, etc.). For example, {empathy}, {empathise}, and {empathising} were substituted with {empathic}. Text not coded, including unimportant terms like {and, a, the, have, etc.}, and negative text were discarded for the frequency count but reviewed and examined to gain an overall sense of the interview.

*Step 6 – Collect data*

Data were analysed and collated manually by reading and highlighting text in a PC using the coding scheme in step 5. No text analysis or content analysis software was used in this analysis. Keywords were marked in red and are reported in Appendix E.4. Keywords needed to appear "frequently" (i.e. at least 3-4 times) to be considered "important" for this thesis.

*Step 7 – Assess reliability and validity of results*

Reliability is the extent to which a measure, procedure, or instrument yields the same result in repeated trials. Validity is the degree to which a study

accurately reflects or assesses the specific concept that the researcher is attempting to measure.

Content analysis of interview data does not include descriptive analysis. Therefore, reliability and validity of this content analysis cannot be established.

*Step 8 – Analyse the data*

1. Proximity analysis, where there is co-occurrence of the explicit categories (words and phrases), was conducted on data to explore a suggested overall meaning of each interview.
2. Relational analysis – Relationships between the concepts were explored for signs of strength of meaning. It is recognised that pre-coding may affect these results. Data was examined manually for:
  - a. Strength of relationship: The degree to which two or more concepts are related. Identifying strength of a relationship is key when determining whether or not words like "unless", "perhaps", or "maybe" are related to a particular section of text, phrase, or idea. Use of words like "unless" would tend to indicate strength of meaning, whilst "maybe" and "perhaps" would imply weakness of meaning (doubt).
  - b. Signs of relationship: Refers to whether or not the concepts are positively or negatively related. For example, "emotional intelligence" and "behaviour".
  - c. Direction of relationship: Where "X implies Y", "X occurs before Y", and "if X then Y".
3. Exploring differences – Looking manually for differences between the variables determined for this study.

b. Thematic Analysis

A thematic analysis was conducted on the responses to the four questions in executive interviews to summarise the main themes that emerged. Illustrative quotes were used as supportive evidence. Using the transcribed executive interviews, the following steps were carried out in the thematic analysis process (adapted from Aronson 1994; Kabay 2006):

1. Review seven transcribed executive interviews and extract sentences, paragraphs, direct quotes, or paraphrasing of common ideas from respondent material.
2. Type brief themes from each interview into a Microsoft Excel spreadsheet, one line per theme. In a column assigned to represent the particular interview number, enter the page number where the theme occurred to enable the reference to be found quickly.
3. Identify a few general areas into which the themes seem to fall and assign these general areas category numbers.
4. Classify each brief theme in item 1 using numbers assigned to categories identified in item 3. For example, 10 Corporate culture.
5. Sort the database, using category numbers assigned in step 4 to obtain patterns and clusters of interviews discussing particular themes. Assign additional new category numbers if required, by adding a digit to the original numerical code. For example, 101 Economic value.

**3.6.1 Analysis of executive interview transcripts**

Analysis of the seven transcribed audio recordings (50, A4 pages) of interviews was conducted using content and thematic analysis to determine if emotional intelligence was being applied and implemented in Singapore companies as part of corporate staff selection, appraisal, promotion, and retention

policies and as a corporate priority in staff training. Executive interview summaries are found in Appendix C.3.

Insch et al. (1997, p. 7) view content analysis as particularly relevant to leadership researchers and hold that it can be used as a tool to triangulate research findings. Colorado State University argued for two general categories of content analysis: conceptual analysis and relational analysis. *Conceptual analysis* can be thought of as establishing the existence and frequency of concepts – most often represented by words or phrases – in a text. In contrast, *relational analysis* goes one step further by examining the relationships among concepts in a text. Colorado State University reported advantages of content analysis to include: looking directly at communication via the text, providing historical and cultural insight, allowing quantitative and qualitative analysis of data, and providing insight into complex human models of thought and language use. Thematic analysis summarises identifiable themes and patterns of living and/or behaviour (Aronson 1994, p. 1).

This study was conducted in the context of exploring emotional intelligence abilities and competencies for leadership. The communication, historical and cultural insights of corporate leaders, and complex organisational models they administer can all be examined using content and thematic analysis. It is relevant to use content and thematic analysis here to help make sense of the executive interview data.

### **3.7 EASEQuadrant**

*EASEQuadrant* (figure 3.1; Gosling & Gosling 2004, p. 287) is the author's proposed new theoretical framework, or model, for:

1. Profiling (classifying and interpreting) an individual respondent's emotional intelligence quotient (EIQ) **area scores** as measured by MSCEIT (section 3.3); and

2. Developing an individual's emotional intelligence abilities and competencies.

Set on two axes of experiential emotional leadership and strategic emotional leadership, The *EASEQuadrant* model, incorporating emotional intelligence constructs (MSCEIT: Mayer et al. 2002b) and cognitive-behavioural insights (Beck 1976, 1991, 1993; Ellis 1962/1994, 1985, 2003; Seligman 1992, 1995), comprises four quadrants in a matrix, each undergirded by one branch of the ability model of emotional intelligence measured by the MSCEIT (Mayer et al. 1990; Mayer & Salovey 1997; Salovey & Mayer 1990): (1) Perceiving Emotion (Evaluate my perceptions), (2) Using Emotion (Affirm changed behaviour), (3) Understanding Emotion (Strengthen emotional intelligence), and (4) Managing emotion (Emphasise choice and detachment).

The first quadrant of *EASEQuadrant*, **evaluate my perceptions**, questions one's capacity for emotional perception and level of emotional awareness (identifying and expressing emotion).

The second quadrant of *EASEQuadrant*, **affirm changed behaviour**, leads one to understand their EAR–Identity (Event – Appraisal – Response); the behaviour you want to be (Gosling & Gosling 2004). One learns a key cognitive technique to reframe memory, thoughts, values, beliefs and expectations that signal emotional distress and enjoyment. Cognitive reframing (Beck 1976; Ellis 1962/1994) facilitates the use and assimilation of emotion in problem solving.

The third quadrant of *EASEQuadrant*, **strengthen emotional intelligence**, leads one to learn and understand emotion chains (transitions between emotions) and complex emotions and practise effective communication skills.

The fourth and final quadrant of *EASEQuadrant*, **emphasise choice and detachment**, revolves around making right choices about *how* a person wants to behave with emotional intelligence. In this quadrant, a person learns to build a feeling long-term trust through improved self and social management, developing emotional wisdom to be an effective emotionally intelligent leader.

The four quadrants of *EASEQuadrant* form a sequential process: identifying (perceiving and expressing) emotion provides a platform for using emotion, which in turn provides a foundation for understanding emotions, and then contributes to emotional management of self and others. Whilst each of these factors can and is considered independently, in combination they form an individual's emotional intelligent abilities. This sequence of emotional intelligence development follows the white curved line in the *EASEQuadrant* model (figure 3.1), moving through the two areas of the Mayer & Salovey model: experiential and strategic emotional intelligence.

*EASEQuadrant* is utilised in this study in the classification and interpretation of the emotional intelligence of 86 managers who responded and were tested in this study by the online MSCEIT. The results of this analysis are reported in chapter 4.3.3.

*EASEQuadrant* is a significant new contribution of this thesis to the knowledge base of emotional intelligence, and in particular, as a tool for the applied use of emotional intelligence. It is important therefore, that the rationale (section 3.7.1), development process (section 3.7.2), and utility of *EASEQuadrant* (section 3.7.3) are described.

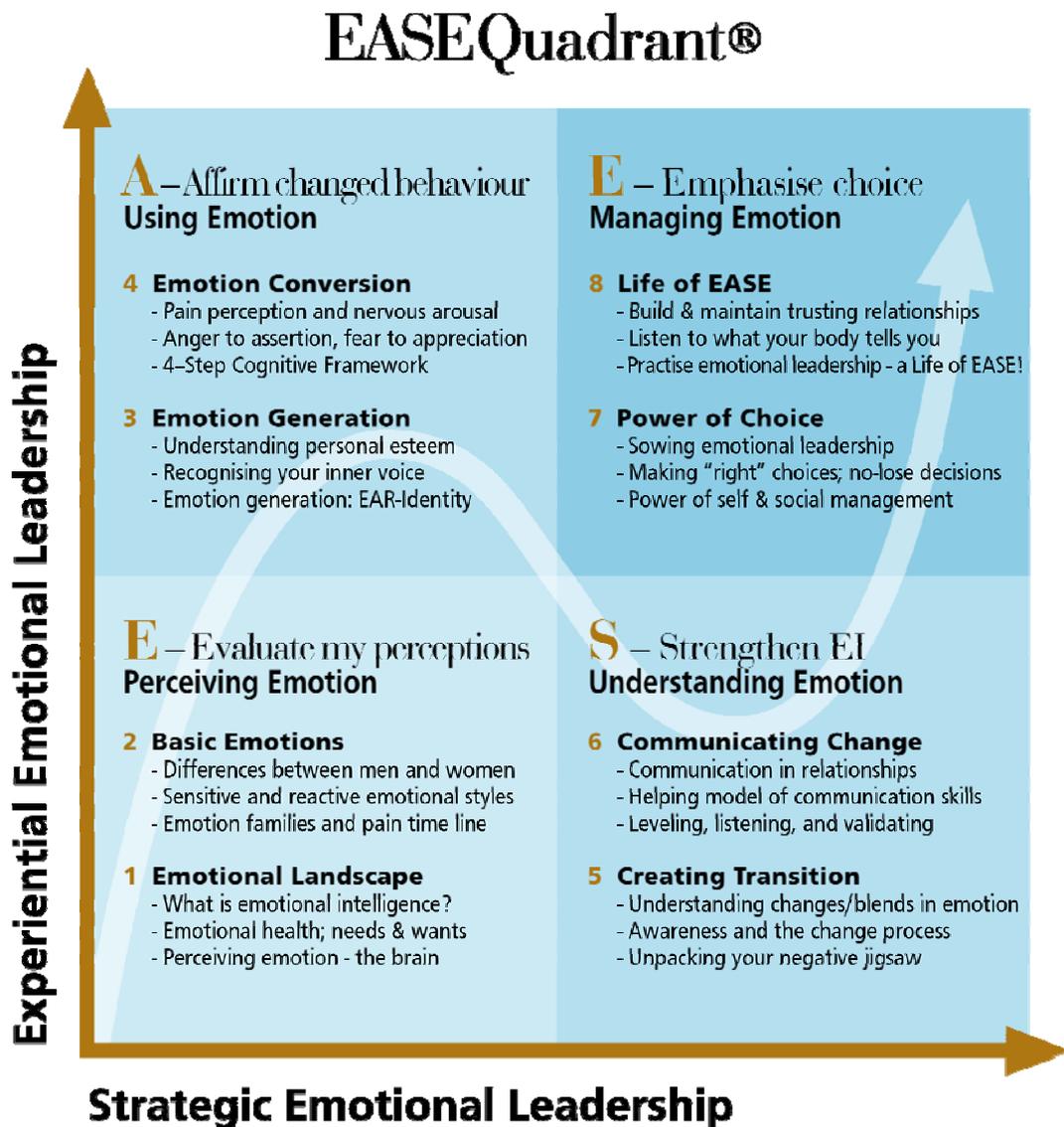


Figure 3.1 – *EASEQuadrant*

### 3.7.1 Rationale for *EASEQuadrant*

The rationale behind the creation of *EASEQuadrant* was the need for additional studies on the measurement, utility, and influence of emotional intelligence for organisation effectiveness and individual success; the applied context of emotional intelligence. This study argues for the premise that emotional intelligence was one means of predicting important outcomes in organisations and performance in individuals (Goleman 2001b; Mayer 2005; Palmer 2003a) and it

adds to literature on emotional intelligence providing quantitative and qualitative data in support of this position. The *EASEQuadrant* was created in 2002 primarily as a model to enhance the utility of emotional intelligence, measured by the MSCEIT. By 2004, as the author developed his thinking about how to develop emotional intelligence in leaders, *EASEQuadrant* had become a central component of his new theory of emotional leadership practice (ELP) (figure 3.2), a construct to develop the emotional knowledge, emotional style, and emotional intelligence of individuals across organisations to enhance emotional well-being, individual success, and organisation effectiveness.

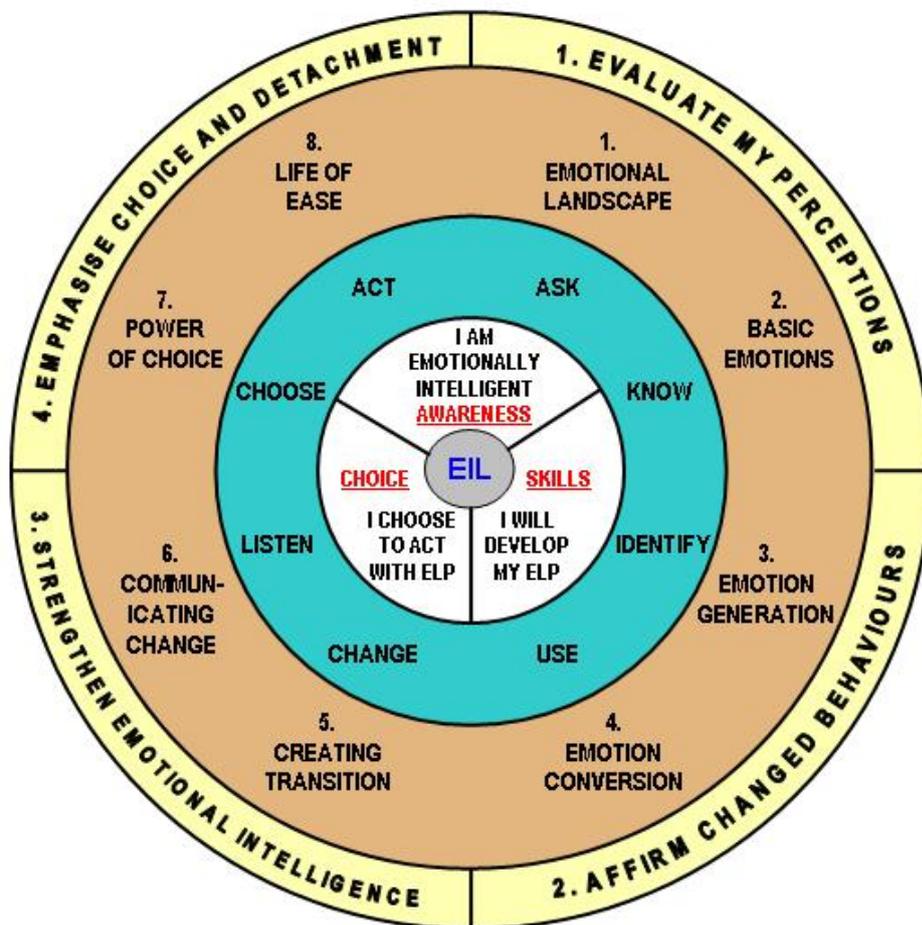


Figure 3.2 – Emotional Leadership Practice - ELP

The author believed that whilst MSCEIT scores in themselves could be analysed using descriptive statistics, a model that could be used to classify and

interpret MSCEIT scores on a grid and also teach successful leaders *how* to apply their emotional intelligence abilities in every day living would be practical as a model for training and development in emotional abilities. Thus *EASEQuadrant* was conceived to profile emotional intelligence scores and train managers in emotional intelligence, derived and adapted from the four branch mental ability model of emotional intelligence by the Mayer, Salovey, Caruso. The mental ability model, measured by the MSCEIT, was chosen to underpin *EASEQuadrant* as the author believed that the MSCEIT established reliably an individual's emotional landscape; the point from where he or she would begin their journey in developing their emotional skills.

It is argued in this study that emotional intelligence, in and of itself, is valued as a capacity required for organisation effectiveness and individual performance. *EASEQuadrant*

1. Provides a graphical representation of emotional intelligence scores at the commencement and conclusion of training, and
2. A framework that teaches successful leaders *how* to apply their emotional intelligence skills to achieve positive measurable long-term change in behaviour leading to improved individual success and organisation effectiveness.

The principle objective then, for the working model of the new theory emotional leadership practice, was to develop an emotionally intelligent leader (EIL) through a strategy of emotional leadership, underpinned by a belief set comprised of:

1. AWARENESS – Learning emotional knowledge, understanding your emotional style, and developing emotional intelligence.
2. SKILLS – Practising an emotional leadership skill set.
3. CHOICE – Choosing to contemplate and act with emotional leadership, not merely survive.

### **3.7.2 Development of the *EASEQuadrant* model**

As stated in section 3.7.1, the author initially conceived the *EASEQuadrant* model as a matrix for emotionally intelligent leadership, derived and adapted from the four branches of the ability model of emotional intelligence. It now forms the development component of a new integrated theory of Emotional Leadership Practice (ELP) (figure 3.2), originated by the author, to develop emotionally intelligent leaders (EIL). Development of the *EASEQuadrant* model preceded, but was integral to, the new theory of emotional leadership practice centred on the strategy of emotional leadership. This thesis now explains the process of the development of the model, beginning with the concept of emotional leadership.

#### **a. A strategy of emotional leadership**

*The ultimate value of life depends upon awareness, and the power of contemplation rather than upon mere survival – Aristotle, Greek philosopher, 384-322 BCE)*

In developing a theory of emotional leadership practice the author sought to place a strategy of emotional leadership at the forefront of applied leadership and management skills. He did not seek to replace the work of theorists and practitioners of developed models of management and leadership. In his book (Gosling & Gosling 2004) the author argued that the premise underlying *EASEQuadrant* was that effective emotional leadership drove situational and functional leadership behaviours. Established theories of management and leadership (Drucker, 1966; Drucker, 1974; Drucker & Maciariello, 2006; Maciariello, 2006) offer ideas of what an effective manager must do to succeed through situational and functional leadership techniques, but doing these things right does not mean necessarily that a manager will succeed. He or she may be unable to deal effectively with negative emotion and the physiological impact of

negativity felt in the body from situational and functional leadership activities and therefore be a less effective leader.

The author felt that what seemed to be missing from established management and leadership theories was integration of the emotional component. This was being addressed (For example, see Ashkanasy & Daus 2002; Caruso & Salovey 2004; Chopra 2004; Goleman et al. 2001; Weisinger 1998), yet, if we agree with Chopra (2004), that emotions rule over much of what we do and most of human behaviour is limited by restricted awareness, the impact that emotions have on management and leadership needs to be addressed with some urgency. The author's new theory of emotional leadership practice aimed to equip managers and leaders with the emotional knowledge, style, skills, and intelligence to transform their performance in all management and leadership functions and situations. The theory argues that it is difficult to achieve individual and organisational goals without practising emotional leadership, which moves leaders beyond a manager's fight-flight and ego responses to informed responses of awareness, skills, and choice.

What then is emotional leadership?

Leadership is about influencing others to achieve your vision. Parolini (2005, quoting House, Hanges, Ruiz-Quintanilla, Dorfman, Javidan & Dickson 1999, p. 184), described leadership as a social process; 'the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organization' (p. 1). Leaders influence people through developing a feeling of long-term trust in their business, professional, and social relationships. Emotional leadership is learning and applying emotionally intelligent behaviours that gain a feeling of long-term trust – the point from where successful relationships move forward Gosling & Gosling (2004, p. 289).

Mayer (2000b) argued that emotional intelligence was 'the capacity to process emotional signals about relationships...the capacity to reason with emotion, particularly to perceive, integrate, understand, and manage emotions' (p. 427). Ashkanasy & Daus said, 'Emotionally intelligent leaders...are able to

regulate their own emotion and the emotion of others and use emotional information in decision-making to achieve creative and positive outcomes' (2002, p. 81). Gosling & Gosling (2004) believed that managers who exercised emotional leadership in whatever role they found themselves – management, administration, and leadership – would be behaving as an emotionally intelligent leader. Those managers who wanted to be emotionally intelligent leaders had a responsibility to exercise emotional leadership in their interactions with others assisting them to gain emotional knowledge, understand their emotional style, develop emotional skills, and nurture emotionally intelligent behaviour. The author's new theory of emotional leadership practice argued that a leader can exercise emotional leadership in relationship with others only if he or she has the belief set of the emotionally intelligent leader. Becoming an emotionally intelligent leader began by choosing to adopt a strategy of emotional leadership.

What then is emotional leadership practice?

The focus of emotional leadership practice is on emotionally intelligent leaders building trust through relationships; inspiring people to elevate emotional well-being and achieve their goals. Goldsmith & Morgan (2004) say, 'Leadership...is a relationship...involving a reliance on other co-workers to achieve objectives' (p. 75). Emotional leadership practice is about adding relationship to the leadership puzzle.

Why would anyone want to add relationship to leadership? The author and his business partner have asked that question for the past nine years while coaching and counselling more than 2,100 clients from 73 ethnic groups from 36 corporations in Singapore, South East Asia, and Australasia. Usually the response is a stunned silence. Our experience is that chief executives, senior executives, and managers have good reason to feel inadequate when it comes to identifying and understanding the emotional leadership components required for inspirational leadership. They must find ways to motivate and engage people and rouse their commitment to corporate and individual goals whilst often feeling overwhelmed and inadequate about how to achieve this, how to lead effectively.

There is simply too much advice out there on emotions, intelligence, and emotional intelligence, and too little advice on how to obtain and apply emotional knowledge and emotional intelligence. Leadership theories, including situational leadership (Hersey & Blanchard, 1969 Cited in Johansen, 1990; Masood, Dani, Burns & Blackhouse, 2006), functional leadership (Lord, RG, 1977; Fleishman, Mumford, Zaccaro, Levin, Korotkin & Hein, 1991), team leadership (Zaccaro, Rittman & Marks, 2001), and transformational leadership (Bass, 1985, 1990; Avolio, Waldman & Yammarino, 1991), agree that leaders need physical fitness, energy, self-awareness, intuition, creativity, vision, authority, and strategic direction. But we've found in our cognitive-behavioural coaching and counselling practice that too few leaders deal adequately with their fight/flight responses (our stand and fight or run and hide response) and ego responses (being nasty, manipulative, confrontational, stubborn and/or playing the victim), which govern ninety-nine percent of human behaviour (Chopra, 2004). But we have discovered that emotionally intelligent leaders practise these three aspects of emotional leadership:

1. They are emotionally aware. Inspirational leaders choose to be themselves, ask others about their perceptions, show weaknesses, expose vulnerability, and not be threatened by difference, which results in them being approachable and genuine. They communicate empathy to reveal their care and understanding of others.
2. They practise emotional leadership skills. They recognise and can moderate their own anger (fight) or anxiety (flight) ego response in order to be effective in and not damage relationships.
3. They choose to act with emotional intelligence. They possess the ability to recognise and express emotions in themselves and others, understand the signals that emotions send about what the person is experiencing, and manage their own and others' emotions.

These three aspects of emotional leadership formed the belief set of the emotionally intelligent leader introduced in section 3.7.1; the goal of the new theory of emotional leadership practice (depicted in figure 3.2 and table 3.1). A manager may choose not to add emotional leadership to the leadership puzzle, but few people would want to be led by him or her.

The process to develop the emotional leadership practice framework thus grew out of a need to incorporate activities to produce a specific output for a client, namely, an emotionally intelligent leader – the most important factor in a local environment – eliminating concerns of chief executives on star performance, employee retention, and organisation effectiveness. These activities placed a strong emphasis on several core principles on *how* to develop emotional leadership; the applied use of emotional intelligence. The process ensured that the theory:

1. Had a goal (the reason the client does the programme) – to become an emotionally intelligent leader (EIL).
2. Had clearly defined inputs – emotional intelligence scores measured by the MSCEIT, EQ-I, and/or Genos EI – of emotional intelligence assessments at the commencement and conclusion of the programme.
3. Had clearly defined outputs – reports of measurable long-term behavioural improvement from psychometric testing of emotional intelligence that feed into each quadrant of *EASEQuadrant*. For example, Branch 1 scores feed into the 'E – Evaluate my perceptions' quadrant of the *EASEQuadrant* matrix as one part of experiential emotional leadership, Branch 2 scores feed into the 'A – Affirm changed behaviour' quadrant, and so on..
4. Used resources, including time, energy, and provision and processing of new information.
5. Had specific ordering of work activities performed across time and space. For example, role plays, reflective individual exercises, small group discussions, and skills practice sets over two days in the workshop and

emotional leadership coaching over a four month, six month, or annual period.

6. Included activities that may affect more than one quadrant as part of becoming emotionally intelligent leader. For example, case studies of clients who had completed the programme.
7. Created value of some kind to the client, which may be internal or external to the individual.
8. Had a structure and call for action, which can be repeated – A plan of action steps for ongoing behavioural change and improvement.

The elements of the ELP framework (figure 3.2), are structured in four separate components (table 3.1): (1) four core principles that underpin the framework, (2) a two-day workshop to develop emotional awareness, including emotional knowledge, emotional style, and emotional intelligence, (3) short-term transactional interventions in the form of emotional leadership skills learned through one-on-one coaching post workshop, and (4) establishing the belief set of the emotionally intelligent leader:

1. Emotional Leadership Principles – EASE
2. Emotional Leadership Development – *EASEQuadrant* (see figure 3.1)
3. Emotional Leadership Skills – EL Coaching (table 3.2)
4. Belief Set of the Emotionally Intelligent Leader (EIL)

Emotional leadership principles (section 1 of the model; table 3.1) undergird the theory of emotional leadership practice. Emotional leadership development (section 2 of the model; table 3.1) has been depicted by *EASEQuadrant* model (figure 3.1) and is discussed further in section 3.7.2b following. The coaching skills learned and practised in emotional leadership coaching (section 3 of the model; table 3.1) are detailed in table 3.2. The belief set of the emotionally intelligent leader – the objective of the theory of emotional leadership practice – is set out in section 4 of the model; table 3.1.

Table 3.1 – Theory of Emotional Leadership Practice – ELP

---

**1. EMOTIONAL LEADERSHIP PRINCIPLES – EASE**

- E – Evaluate my perceptions
- A – Affirm changed behaviours
- S – Strengthen emotional intelligence
- E – Emphasise choice & detachment

**2. EMOTIONAL LEADERSHIP DEVELOPMENT – *EASE* Quadrant**

**Experiential Emotional Leadership**

E – Evaluate my perceptions (MSCEIT: Perceiving Emotion)

Stage 1: Emotional Landscape

Stage 2: Basic Emotions

A – Affirm changed behaviours (MSCEIT: Using Emotions)

Stage 3: Emotion Generation

Stage 4: Emotion Conversion

**Strategic Emotional Leadership**

S – Strengthen emotional intelligence (MSCEIT: Understanding Emotions)

Stage 5: Creating Transition

Stage 6: Communicating Change

**E – Emphasise choice and detachment (MSCEIT: Managing Emotions)**

Stage 7: Power of Choice

Stage 8: Life of EASE

**3. EMOTIONAL LEADERSHIP SKILLS – EL Coaching**

- 1.ASK others about my perceptions
- 2.KNOW my emotional style
- 3.IDENTIFY the cause of feelings
- 4.USE emotion to problem solve
- 5.CHANGE my experience of living
- 6.LISTEN actively to others
- 7.CHOOSE to influence others
- 8.ACT to enjoy unlimited wealth and abundance

**4. BELIEF SET OF THE EMOTIONALLY INTELLIGENT LEADER (EIL)**

1. AWARENESS – I am emotionally aware
2. TACTICS – I will practise my emotional leadership skills
3. VALUE – I choose to act with emotional intelligence

Table 3.2 – Emotional Leadership Practice (ELP) Skills

<b>DO NOT</b>	<b>DO</b>
<b>Skill 1. ASK others about my perceptions</b>	
<ul style="list-style-type: none"> <li>• Get stuck in my view of myself</li> <li>• Be dismissive, defensive, or doubtful</li> <li>• Put it off – do it now</li> </ul>	<ul style="list-style-type: none"> <li>• Hear the perceptions of others</li> <li>• Be aware of the impact of my mood</li> <li>• Be open to feedback</li> </ul>
<b>Skill 2. KNOW my emotional style</b>	
<ul style="list-style-type: none"> <li>• Be ignorant of my emotional style</li> <li>• Make excuses</li> <li>• Let stress build up</li> </ul>	<ul style="list-style-type: none"> <li>• Know if I am reactive or sensitive</li> <li>• Develop emotional language</li> <li>• Tune into my physical sensations</li> </ul>
<b>Skill 3. IDENTIFY my beliefs, values, expectations</b>	
<ul style="list-style-type: none"> <li>• Reject parts of myself</li> <li>• Be rigid and blocked</li> <li>• Ignore emotional signals</li> </ul>	<ul style="list-style-type: none"> <li>• Challenge my inner voice</li> <li>• Work on my EAR-Identity</li> <li>• Use the GAP to give my life meaning</li> </ul>
<b>Skill 4. USE emotion to problem solve</b>	
<ul style="list-style-type: none"> <li>• Think without emotion</li> <li>• Be angry for the wrong reasons</li> <li>• Withdraw into my burrow</li> </ul>	<ul style="list-style-type: none"> <li>• Use emotion to help thinking</li> <li>• Generate positive emotion states</li> <li>• Practise the 4-Step framework</li> </ul>
<b>Skill 5. CHANGE my experience of living</b>	
<ul style="list-style-type: none"> <li>• Procrastinate</li> <li>• Give in to "blaming" others</li> <li>• Expect immediate acceptance</li> </ul>	<ul style="list-style-type: none"> <li>• Check emotional "chains" &amp; "blends"</li> <li>• Take responsibility for my feelings</li> <li>• Change for the better</li> </ul>
<b>Skill 6. LISTEN actively to others</b>	
<ul style="list-style-type: none"> <li>• Focus on the problem</li> <li>• Move too quickly</li> <li>• Practise INEFFECTIVE listening</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on the person</li> <li>• Level, Listen, Validate</li> <li>• Drop the "YOU" word; practise X-Y-Z</li> </ul>
<b>Skill 7. CHOOSE emotionally intelligent behaviour</b>	
<ul style="list-style-type: none"> <li>• Dwell on "mistakes"</li> <li>• Become trapped in unawareness</li> <li>• Depress dealing with emotions</li> </ul>	<ul style="list-style-type: none"> <li>• Give up past conditioning</li> <li>• Make 'right' choices</li> <li>• Trust in my emotions</li> </ul>
<b>Skill 8. ACT to enjoy unlimited wealth and abundance</b>	
<ul style="list-style-type: none"> <li>• Be emotionally constipated</li> <li>• Focus on what I will be</li> <li>• Give away my power</li> </ul>	<ul style="list-style-type: none"> <li>• Listen to my body</li> <li>• Build a feeling of long-term trust</li> <li>• Practise emotional leadership</li> </ul>

Table 3.2 – Emotional Leadership Practice (ELP) Skills (Continued)

You have been successful practising ELP . . .

. . . in ASKING when others see you:
<ul style="list-style-type: none"> <li>• Choosing the behaviours you will improve</li> <li>• Changing your mood after recognising the impact it is having on others</li> <li>• Moving from your point of view to your viewing point</li> </ul>
. . . in KNOWING when others see you:
<ul style="list-style-type: none"> <li>• Responding to them consistently, recognising your emotional style</li> <li>• Taking account of the way they process emotion</li> <li>• Developing emotional language and managing the physiological effects of emotion</li> </ul>
. . . in IDENTIFYING when you see yourself:
<ul style="list-style-type: none"> <li>• Telling your inner voice to "get lost"</li> <li>• Adjusting your beliefs, values, and expectations that cause you pain</li> <li>• Putting a "GAP" between events and your responses</li> </ul>
. . . in USING when others see you :
<ul style="list-style-type: none"> <li>• Generating emotions within you that empathise with their feelings</li> <li>• Generate a mood state that has a favourable impact on you and others</li> <li>• Creating the emotion you want to help you problem solve</li> </ul>
. . . in CHANGING when others see you:
<ul style="list-style-type: none"> <li>• Recognising and understanding emotional "chains" and "blends"</li> <li>• Taking responsibility for your feelings and not blaming others for your pain</li> <li>• Actively working on the change process, moving towards acceptance</li> </ul>
. . . in LISTENING when others feel they are:
<ul style="list-style-type: none"> <li>• No longer being attacked unjustly through your ineffective communication</li> <li>• Being heard – their feelings are being validated</li> <li>• Being accepted, not judged by you</li> </ul>
. . . in CHOOSING when others see you as:
<ul style="list-style-type: none"> <li>• Having a greater sense of self; being consistent and approachable</li> <li>• Making 'right' choices that consider the consequences and happiness of others</li> <li>• Behaving with emotional intelligence; trusting in your emotions</li> </ul>
. . . in ACTING when others see you as:
<ul style="list-style-type: none"> <li>• Experiencing emotion; using it to influence your thinking</li> <li>• Building a feeling of long-term trust in professional, business, and social relationships</li> <li>• Practising emotional wisdom; knowing how to behave when you don't know what to do</li> </ul>

**b. *EASEQuadrant* model**

*EASEQuadrant* is the second component of the theory of emotional leadership practice. In addition to profiling emotional intelligence scored by the MSCEIT, *EASEQuadrant* provides the structure for a four-quadrant, eight-task, training workshop in emotional leadership development, which explores and develops an individual's emotional intelligence, emotional knowledge, and emotional style. Each quadrant in *EASEQuadrant* is a right of passage along a journey to learning and applying emotionally intelligent behaviour to build a long-term feeling of trust in business, professional, and social relationships.

Learning about emotions involves emotional practice – applying one's emotional intelligence. *EASEQuadrant* coaches individuals on *how* to apply their emotional intelligence. The objective of the emotional leadership development programme is to help leaders become emotionally intelligent leaders in their relationships. Coaching in emotional leadership skills helps leaders master their emotional abilities and competencies to behave with emotional intelligence.

***EASEQuadrant* Workshop**

*EASEQuadrant* Workshop is presented as a two-day program. For the experienced emotionally intelligent practitioner the course offers the chance to empower personal and relationship change, for the novice in emotional awareness it offers direction and a way to get started on one's EAR-Identity, and for everyone there is the opportunity to discover the key to what the author regards as the most vital issue in life – emotional wisdom; behaving with emotional intelligence.

*EASEQuadrant* Workshop uses film and media, real life case studies on emotional issues, role-play, slide presentations, reflective individual exercises, and small group discussions to facilitate the learning process. Throughout the programme there are many workshop examples and exercises that illustrate real world applications of emotional leadership. For example, understanding what

comprises the compound emotion of disgust serves as a lead-in to discussing other compound emotions. In the workshop, the exercises and case studies are styled as Emotional Leadership Practice (ELP).

Further details of *EASEQuadrant* Workshop are at Appendix D.

### **3.7.3 Utility of *EASEQuadrant***

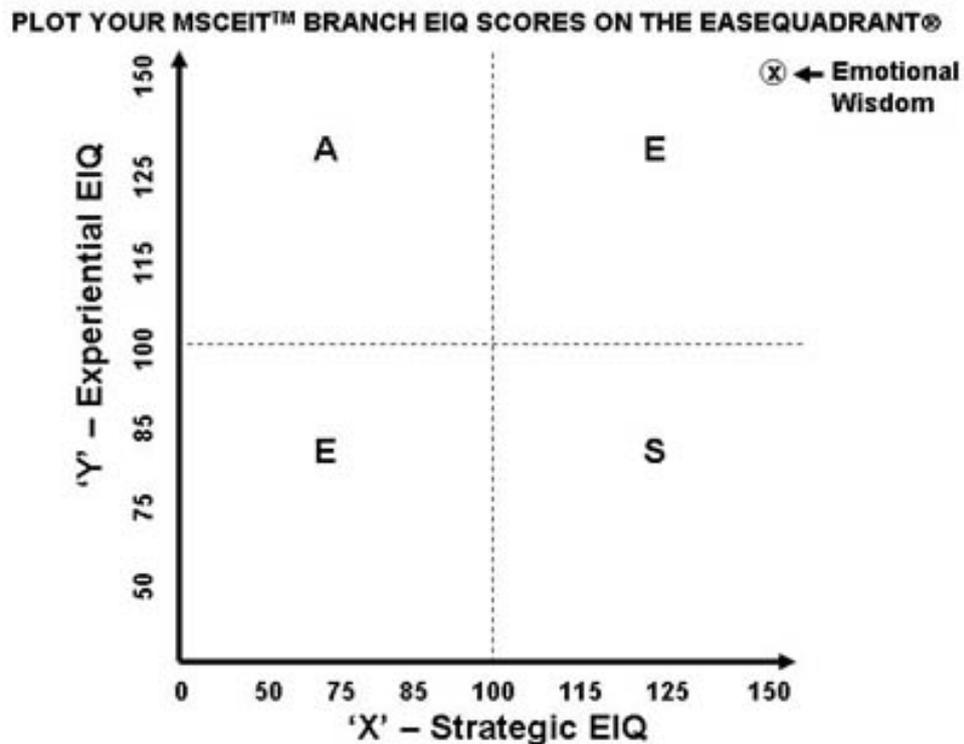
The utility of *EASEQuadrant* is that it provides:

1. A graphical representation of an individual's MSCEIT score from psychometric tests completed before and after training.
2. A comprehensive training programme to develop an individual's emotional intelligence abilities.

A respondent's MSCEIT experiential EIQ area score and strategic EIQ area score are profiled on the *EASEQuadrant* grid (figure 3.3), on the experiential emotional leadership and strategic emotional leadership axes, respectively. Placing MSCEIT area scores on the *EASEQuadrant* grid illustrates where a person is in the eight stages of emotional leadership. Ideally, when a person can place his or her "x" (i.e., where one's experiential emotional intelligence score crosses one's strategic emotional intelligence score) in the top right hand corner of the *EASEQuadrant* grid that person is emotionally free to deal with events in his or her life, applying emotional intelligence. The point at which a participant's experiential EIQ area score and strategic EIQ area score cross is where he or she is in their journey toward practising emotional leadership – applying emotional intelligence.

The goal of each person is to achieve a meeting of their MSCEIT experiential EIQ area score and strategic EIQ area score in the top right hand corner of the *EASEQuadrant* grid. As emotional intelligence is developed, and measuring of a person's emotional intelligence is conducted at the commencement and conclusion of training or coaching, growth in emotional intelligence can be

depicted on the *EASEQuadrant* Grid (see chapter 5.6.2 for a case history – brief analysis). At point **x** on the *EASEQuadrant* grid a person demonstrates significant strength in both experiential and strategic emotional intelligence – the point of emotional wisdom. Such a person behaves with emotional intelligence and builds a feeling of long-term trust in his or her business, professional, and social relationships.



**Figure 3.3 – *EASEQuadrant* Grid**

**a. *EASEQuadrant* Grid Analysis**

In this study, each respondent was classified into one of four groups, based on their MSCEIT experiential EIQ area score and strategic EIQ area score. Each group formed one quadrant of *EASEQuadrant*. Each participant's classification was placed on the *EASEQuadrant* Grid according to his or her group.

The point at which a respondent's experiential EIQ area score and strategic EIQ area score cross was marked on a scatter plot by its attribute point. Each

manager's attribute point on the *EASEQuadrant* grid reflected where he or she sat in their journey toward practising emotional wisdom – applying emotional intelligence and emotional knowledge. The classification of all respondents into four groups based on their Strategic EIQ and Experiential EIQ scores considered concurrently can be depicted using the *EASEQuadrant* plot graph. *EASEQuadrant* analysis for managers in this sample is reported in chapter 4.3.3.

### 3.7.4 *EASEQuadrant* summary

*EASEQuadrant* was developed and used in this study to classify and interpret data collected using the MSCEIT.

The value of the *EASEQuadrant* model introduced in this chapter is as a tool for the applied use of emotional intelligence. *EASEQuadrant* posits that:

1. The goal of each manager must be to develop their emotional skills to get their MSCEIT experiential EIQ area score and strategic EIQ area score to meet in the top right hand corner of the *EASEQuadrant* Grid (Point **x** on figure 3.3). At this point a manager demonstrates significant strength in both experiential and strategic emotional intelligence as measured by the MSCEIT, one means of predicting important outcomes in organisations and performance in individuals.
2. A manager with MSCEIT EIQ area scores that cross at point **x** (figure 3.3) is highly likely to be a person who exhibits consistent emotionally intelligent behaviour valued of an effective leader – one who is able to influence others, by example and persuasion, through building a feeling of long-term trust in business, professional, and social relationships. Such a person applies his or her emotional knowledge, emotional style, and emotional intelligence to achieve a positive change in behaviour and is an emotionally intelligent leader.

### 3.8 Data Sets

There are three sets of data from 139 respondents for quantitative and qualitative analysis.

**Data Set A – 86** Respondents (61.9%) completed the MSCEIT online. Of these, 31 also completed the Questionnaire in Data Set B.

**Data Set B – 84** Respondents (60.4%) completed the Research Questionnaire. Of these, 53 completed the Questionnaire only.

**Data Set C – 7** Executive interviews completed with six Chief Executive Officers and one Regional Human Resource Manager from corporations in Singapore.

### 3.9 Data Analysis

In this study a sample (see section 3.1) completed the online MSCEIT (section 3.3), research questionnaire (section 3.4), and executive interviews (section 3.5). A description of the data analysis that was conducted in this study follows (sections 3.9.1 to 3.9.4).

#### 3.9.1 Data Analysis on Data Set A – MSCEIT Scores

Reporting on research question 1, parts a and b:-

**Descriptive statistics** reporting on:

- **Respondent** MSCEIT computerised test scores unscaled score means, standard deviations, and intercorrelations, using demographic variables received from the test scorer and personal information sheets (Appendix A.3).

- **Profiling** (classifying and interpreting) individual respondent's emotional intelligence quotient (EIQ) area scores as measured by MSCEIT using *EASEQuadrant* (section 3.7).
- **Comparison** of the MSCEIT V2.0: American general consensus norm versus the Singapore sample.

### 3.9.2 Data Analysis on Data Set B – Research Questionnaire

Reporting on research questions: 2(i-v), 3a (i-ii), 3b(i), 3c, 3d, and 3e(i-v).

**Descriptive statistics** reporting on respondent research questionnaire questions Nos. 2 – 5, 7 and 8.

NOTE: As questionnaires were anonymous, no demographic analysis could be conducted on questionnaire data. As mentioned in section 3.2.2, research questionnaires (Appendix A.5) were returned independent of Personal Information Sheets (Appendix A.3). As stated in section 3.2.1 data from Personal Information Sheets was matched to online test results to provide demographic characteristics of test takers (see Table 4.5).

### 3.9.3 Content and Thematic Analysis on Data Set C – Executive Interviews

Reporting on research questions 2 and 3; parts 2 (vi-vii), 3b (ii), and 3f (vi).

**Content and Thematic** Analysis of seven transcripts of recorded executive interviews.

### 3.9.4 Qualitative Analysis

Reporting on research questions 1 – 3.

**Qualitative analysis** was conducted in this study using results from:

1. Descriptive statistics and *EASEQuadrant* profiling.

2. Handwritten answers to research questionnaire questions 1, 6 and 9 (see Appendices E.1 – E.3 respectively).
3. Content and thematic analysis of executive interviews.

The results of this triangulation of data are presented in chapter 4 and discussed in chapter 5 as follows:

1. The emotional intelligence of managers in Singapore (chapter 5.2)

Discussion on the emotional intelligence of managers in Singapore based on statistical evidence from MSCEIT Scores.

2. The influence of emotional intelligence on organisation effectiveness (chapter 5.3)

Discussion on the perceptions of managers and senior level executives in Singapore of the influence of emotional intelligence on organisation effectiveness.

3. The importance of emotional intelligence for individual success (chapter 5.4)

Discussion on the perceptions of managers and senior executives in Singapore of the importance of emotional intelligence in the workplace for star performance, selection, leadership, team building, appraisal, and training.

4. Summary of discussion (chapter 5.5)
5. Implications arising from this study (chapter 5.6)

## Chapter 3 – Methodology

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## CHAPTER 4

### RESULTS

This chapter presents quantitative analysis and interpretation of data completed by 139 adult respondents for this project. The data was obtained using MSCEIT online tests (chapter 3.3), research questionnaires (chapter 3.4), and executive interviews (chapter 3.5).

#### 4.1 Scoring of the MSCEIT

The test publisher, Multi-Health Systems, Inc., (MHS) Toronto, Canada, scored the raw data from the MSCEIT Version 2.0 (141-items). As outlined in chapter 3, individual MSCEIT test raw data was scored according to the MSCEIT Version 2.0 general consensus scoring criteria. Refer to table 4.1 for the structure and levels of feedback from the MSCEIT (Mayer et al. 2002b, p. 8).

Table 4.1 – Structure and levels of feedback from the MSCEIT V. 2.0

Overall Scale	Two Areas of the MSCEIT	Four Branches of the MSCEIT	Task Level	
Emotional Intelligence (EIQ) MSCEITOX	Experiential Emotional Intelligence (EEIQ) AREA_EXX	BRANCH1X Perceiving Emotions (PEIQ)	Faces	A_TOTX
			Pictures	E_TOTX
		BRANCH2X Facilitating Thought (FEIQ)	Facilitation	B_TOTX
			Sensations	F_TOTX
	Strategic Emotional Intelligence (SEIQ) AREA_REX	BRANCH3X Understanding Emotions (UEIQ)	Changes	C_TOTX
			Blends	G_TOTX
		BRANCH4X Managing Emotions (MEIQ)	Emotional Management	D_TOTX
			Emotional Relations	H_TOTX

Chapter 4 – Results

**4.1.1 MSCEIT scales**

It is interesting to note that inter-correlations among most of the MSCEIT subscales (two area and four branch scores) suggest that the relevant abilities are interdependent to some extent (table 4.2).

Table 4.2 – Inter-correlations for MSCEIT Total, Areas, and Branch Scores (N=86)

	MSCEITOX	AREA_EXX	AREA_REX	BCH1X	BCH2X	BCH3X	BCH4X
MSCEITOX	1.00	.87**	.76**	.81**	.71**	.70**	.59**
AREA_EXX		1.00	.37**	.92**	.79**	.39**	.25*
AREA_REX			1.00	.34**	.32**	.82**	.84**
BRANCH1X				1.00	.51**	.41**	.19
BRANCH2X					1.00	.27*	.28*
BRANCH3X						1.00	.38**
BRANCH4X							1.00

\*\*p<.01, \*p<.05 (two-tailed)

As shown in table 4.3 there are sizeable correlations among the MSCEIT task level scores, with some exceptions, most notably the lack of significant correlations between H\_TOTX (Emotional Relations) on the one hand, and A\_TOTX (Faces), B\_TOTX (Facilitation), C\_TOTX (Changes), and E\_TOTX (Pictures), on the other hand. This means that individuals will almost always show some variation in performance between tasks and between taking the MSCEIT test. Task scores have greater variability than do area and branch MSCEIT scores. 'Respondents whose performance is highly consistent across the eight subtasks will score low on scatter. Respondents whose performance varies a lot from task to task will yield a high score for scatter' (Mayer et al. 2002b, p. 20). A high scatter score indicates large discrepancies in results for different tasks.

Table 4.3 – Intercorrelations for MSCEIT Task Level Scores – TOTX's (N=86)

	A_TOTX	B_TOTX	C_TOTX	D_TOTX	E_TOTX	F_TOTX	G_TOTX	H_TOTX
A_TOTX (Faces)	1.00	.40**	.33**	.10	.30**	.29**	.22*	.18
B_TOTX (Facilitation)		1.00	.20	.31**	.42**	.48**	.33**	.19
C_TOTX (Changes)			1.00	.02	.21*	.21*	.30**	.18
D_TOTX (Emotional Management)				1.00	.09	.14	.22*	.49**
E_TOTX (Pictures)					1.00	.35**	.27*	.09
F_TOTX (Sensations)						1.00	.31**	.30**
G_TOTX (Blends)							1.00	.38**
H_TOTX (Emotional Relations)								1.00

\*\*p<.01, \*p<.05 (two-tailed)

#### **4.1.2 Reliabilities of MSCEIT task level measures**

Reliabilities of MSCEIT subscales, which were scored for eight task levels, were estimated by the Cronbach's alpha coefficients indicating their internal consistencies. The MSCEIT subscales are:

- A. Faces – Identifying and expressing how you or another person felt based upon his or her facial expression.
- B. Facilitation (mood) – Ability to generate a mood to assist and support thinking and reasoning.
- C. Changes – Knowledge of emotional "chains"; how emotions transition from one to another.
- D. Emotion management – The effectiveness of alternative actions in achieving a certain result in situations where a person must regulate his or her own emotions.
- E. Pictures – The extent to which images and landscapes express emotion.
- F. Sensations (empathy) – Comparing different emotions to different situations such as light, colour, and temperature.
- G. Blends – Ability to analyse blends of emotions for their parts and assemble simple emotions into compound emotions.
- H. Emotional relationships – Ability to incorporate your own and others' emotions into decision making.

The results are encouraging as moderate to high reliabilities were observed (table 4.4). The lower reliabilities for emotion management, sensations, and blends are reflective of the lower reliability of task scales (Mayer et al. 2004a, p. 202).

Given that the reliability of some of these scores is lower than other MSCEIT scores (see table 4.4), task scores must be used with caution. The MSCEIT test manual explicitly warns that 'Task scores are rough approximations of one's actual ability in these areas. These scores have much greater variability than do other MSCEIT scores' (Mayer et al. 2002b, p. 19, 77).

Table 4.4 – Cronbach's alpha coefficients for the eight MSCEIT subscales

Subscale	No. of items	Cronbach's alpha coefficient
A – Faces	20	.85
B – Facilitation	15	.73
C – Changes	20	.62
D – Emotion Management	20	.56
E – Pictures	30	.92
F – Sensations	15	.59
G – Blends	12	.42
H – Emotional Relationships	9	.61

## 4.2 Respondents

As was stated in section 3.8 data received from 139 respondents for quantitative and qualitative analysis was in three sets:

1. **Data Set A** – 86 Respondents (62%) completed the MSCEIT online. Of these, 31 also completed the Questionnaire in Data Set B.
2. **Data Set B** – 84 Respondents (60%) completed the Research Questionnaire. Of these, 53 completed the Questionnaire only.

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3. **Data Set C** – Seven Executive interviews were completed with six Chief Executive Officers and one Regional Human Resource Manager from corporations in Singapore.

Table 4.5 shows the demographic characteristics of the MSCEIT Singapore sample (N=86) for analysis (section 4.3.4). Data for this research on emotional intelligence of this sample of managers in Singapore came from 86 respondents who occupied managerial positions in an unknown number of companies. As can be seen from Table 4.5, there is almost equal distribution in the three age groups (26-34, 35-41, and 41-62) and the mean age is 39.70 years (SD=7.98). There is almost equal distribution of both sexes in this sample.

In terms of education, close to two-thirds of the respondents held a university degree (42%) or postgraduate degree (23%). Four-tenths (40%) of the respondents occupied senior positions in their companies, slightly less than one-third (31%) middle managerial positions, and somewhat more than one-quarter (29%) junior positions.

While 47% of the respondents were foreigners, 53% were Singaporean managers. In terms of nationality, there were 43% Westerners (Australian, Europeans, and Americans), 47% Chinese Singaporeans, and a much smaller proportion of non-Chinese Singaporeans (10%).

Table 4.5 – Singapore sample respondents' demographic characteristics (N=86)

Demographic variable		Frequency	Percent
Age*	26 to 34	29	33.7
	35 to 41	29	33.7
	41 to 62	28	32.6
Sex	Male	44	51.2
	Female	42	48.8
Education	Postgraduate	20	23.3
	Degree	36	41.9
	High school	30	34.9
Management Level	Senior	34	39.5
	Middle	27	31.4
	Junior	25	29.1
Location	Western	40	46.5
	Local	46	53.5
Nationality	Australian, European, American	37	43.0
	Chinese Singaporean	40	46.5
	Non-Chinese Singaporean	9	10.5

However, for the analysis of the questionnaire survey data (section 4.4.2), five (5) respondents with 10 or more missing data in the questionnaire survey were excluded from the analysis, leaving the sample with 79 respondents for

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analysis. For MSCEIT data, since all 86 respondents had complete data, all were included in the analysis.

Results of these analyses of the responses to the scores for MSCEIT scales and subscales, the questionnaire survey, and the executive interviews are presented below with reference to the research questions posed earlier (chapter 2.6).

### **4.3 MSCEIT Scales and subscales analysis**

#### **4.3.1 Research Question 1(a) – How emotionally intelligent are managers in Singapore?**

For the respondents as a whole, the means for all MSCEIT measures are close to 100 (table 4.6). A MSCEIT score of 100 indicates that a person is in the average range of emotional intelligence (Mayer et al. 2002b, p. 18). A person obtaining a MSCEIT score of 115 is one standard deviation above the mean, or, at the 84<sup>th</sup> percentile. If someone obtains an overall MSCEIT score of 85, they are one standard deviation below the mean, or, at the 16<sup>th</sup> percentile. Area, branch and task level results are scored in the same manner. As with all tests, the MSCEIT compares individuals against the normative sample, not with the population in general (Mayer et al. 2002b, p. 33; Appendix B.1).

Table 4.6 provides a summary of the MSCEIT EIQ scores prepared using the structure and levels of feedback (refer again to table 4.1) from the MSCEIT Mayer-Salovey-Caruso Emotional Intelligence Test User's Manual (Mayer et al. 2002b) follows.

Table 4.6 – Singapore sample means and standard deviations for MSCEIT Total, Area, and Branch scores (N=86)

Measure	Mean	Standard deviation
MSCEITOX (EIQ)	95.41	13.87
AREA_EXX (EEIQ)	95.93	16.37
AREA_REX (SEIQ)	96.56	12.02
BRANCH1X (PEIQ)	95.43	17.71
BRANCH2X (FEIQ)	98.63	14.04
BRANCH3X (UEIQ)	100.08	12.85
BRANCH4X (MEIQ)	94.58	12.43

MSCEITOX (EIQ) – Emotional intelligence quotient total score

AREA\_EXX (EEIQ) – Experiential emotional intelligence quotient score

AREA\_REX (SEIQ) – Strategic emotional intelligence quotient score

BRANCH1X (PEIQ) – Perceiving emotions emotional intelligence quotient score

BRANCH2X (FEIQ) – Facilitating thought emotional intelligence quotient score

BRANCH3X (UEIQ) – Understanding emotions emotional intelligence quotient score

BRANCH4X (MEIQ) – Managing emotions emotional intelligence quotient score

The MSCEIT Total EIQ score (MSCEITOX) of 95.41 indicates that this sample of managers in Singapore as a group have an overall ability to reason with emotion, and to use emotion to enhance thought. This score reflects the capacity to perform well in four areas:

- (1) the ability to perceive accurately, appraise, and express emotion;
- (2) the ability to access and/or generate feelings when they facilitate thought;

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- (3) the ability to understand emotion and emotional knowledge; and
- (4) the ability to regulate emotions to promote emotional and intellectual growth (Mayer & Salovey, 1997, p. 10).

Additionally, as each MSCEIT score is an approximate result, each individual MSCEIT report shows how much the MSCEIT Total EIQ score, area scores, and branch scores may change due to variability in the testing process and because human populations are variable and can generate a variety of sample results. This variability is calculated using a 90% confidence interval for the MSCEIT Total EIQ score. For example, a MSCEIT Total EIQ score of 96 is recalculated to a confidence interval from 89 to 103 (Mayer, et al., 2002b, p. 72). This confidence interval reflects the range within which this sample of managers as a group in Singapore can be 90% confident their true emotional ability falls according to the population parameter.

The MSCEIT Experiential Area (EEIQ) score (AREA\_EXX) of 95.93 indicates that this sample of managers in Singapore as a group have the capacity to feel emotion and do so productively. The EEIQ is based on the first two branches of the ability model of emotional intelligence – perceiving and facilitating (using) emotions.

The MSCEIT Strategic Area (SEIQ) score (AREA\_REX) of 96.56 indicates that this sample of managers in Singapore as a group have the capacity to think about emotion and use emotion to facilitate actions in personal and social arenas. The SEIQ is based on the third and fourth branches of the ability model of emotional intelligence – understanding and managing emotions.

The MSCEIT Branch 1 EIQ score (BRANCH1X) of 95.43 indicates that this sample of managers in Singapore as a group have the ability to recognise how they and those around them are feeling. Perceiving emotions involves recognising and interpreting correctly the emotions experienced in facial expression, voice tone, and artistic expressions.

The MSCEIT Branch 2 EIQ score (BRANCH2X) of 98.63 indicates that this sample of managers in Singapore as a group are able to employ their feelings to enhance the cognitive processes for more effective reasoning and problem solving. Using emotion involves being able to generate mood (facilitation) and empathy (sensations) required of a situation or of another person to reflect a different point of view.

The MSCEIT Branch 3 EIQ score (BRANCH3X) of 100.08 indicates that this sample of managers in Singapore as a group have the capacity to understand compound and complex emotions; how emotions progress (emotional chains) and how emotions combine and change (blends).

The MSCEIT Branch 4 EIQ score (BRANCH4X) of 94.58 indicates that this sample of managers in Singapore as a group are able to manage emotion in themselves and in others. They are able to use emotions judiciously in presenting themselves and in dealing with the emotions of other people, without suppressing emotion or over reacting in a given situation.

At the task level, the means for the eight MSCEIT tasks are close to 100.00 (table 4.7), suggesting that the respondents were capable to complete the tasks. This is not unexpected, given the findings reported above. The authors of the MSCEIT caution, 'Remember that Task scores are rough approximations of one's actual ability in these areas. These scores have much greater variability than do ... other MSCEIT scores' (Mayer, Salovey & Caruso, 2002b, p. 77).

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Table 4.7 – Singapore sample means and standard deviations for MSCEIT Task Level Scores (TOTX) (N=86)

Measure	Mean	Standard deviation
A_TOTX	95.65	21.45
B_TOTX	96.50	15.47
C_TOTX	105.47	14.12
D_TOTX	96.80	11.58
E_TOTX	98.24	14.94
F_TOTX	96.74	12.21
G_TOTX	97.43	12.95
H_TOTX	95.06	13.06

Task A\_TOTX – Faces task score

Task B\_TOTX – Facilitation (mood) task score

Task C\_TOTX – Changes task score

Task D\_TOTX – Emotion management task score

Task E\_TOTX – Pictures task score

Task F\_TOTX – Sensations (empathy) task score

Task G\_TOTX – Blends task score

Task H\_TOTX – Emotional relationships task score

*It may thus be concluded that this sample of Singapore managers shows an average level of emotional intelligence abilities as measured by the MSCEIT scales and subscales.*

### **4.3.2 Research Question 1(b) – Is there a difference between the emotional intelligence abilities of local and Western managers in Singapore?**

As there are 15 comparisons to be made between the means for the various measures, to control for capitalization on chance, a more stringent p-value than 0.05 has to be used. This was achieved by using the Bonferroni method, a

statistical adjustment for multiple comparisons, which effectively raises the standard of proof needed. The Bonferroni method requires a new critical ratio by  $p/k$ , where  $p$  is the intended p-value and  $k$  the number of multiple comparisons (Agresti and Finlay, 1997). Thus, the Bonferroni adjusted p-value is  $0.05/15$  or  $0.003$ .

This adjustment reduced the probability of Type I error, namely, rejecting a null hypothesis when in fact it is true. In the context of this analysis, this means concluding that there is a significant difference when in fact there isn't one. However, a word of caution is in order. While probability of Type I error is reduced by the adjustment, the probability of Type II error increases accordingly, leading to the acceptance of a null hypothesis when in fact it is false. In the context of this analysis, this is to conclude that there is no significant difference when in fact there is one. Since Bonferroni adjustment tends to be conservative, the findings reported below are to be taken with due caution in view of the trade-off between the two types of errors (Agresti & Finlay, 1997 pp. 446-447).

With this adjusted p-value as the criterion, out of the 15 comparisons in Tables 4.8, only four are found to be statistically significant (bold-faced). They are for the measures AREA\_REX (Strategic EIQ), BRANCH3X (Understanding emotion), BRANCH4X (Managing emotion), and G\_TOTALX (Understanding emotion blends), all in favour of the foreign managers. Substantively, this means that in this sample of managers foreign respondents were more emotionally intelligently capable in strategic emotional intelligence; understanding complex blended emotions and emotional "chains", in particular analysing blends of emotions, and having the ability that allows the management and regulation of emotion in oneself and others.

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Table 4.8 – Comparison of the emotional intelligence of Foreign and Singaporean (Local) managers in Singapore.

Measure	Foreign (N=40)		Local (N=46)		F-ratio	P
	Mean	S.D.	Mean	S.D.		
MSCEITOX	99.92	12.60	91.50	13.87	8.58	.004
AREA_EXX	98.75	14.40	93.48	17.70	2.25	.137
AREA_REX	102.18	11.10	91.67	10.66	19.99	<b>.001</b>
BRANCH1X	98.78	15.16	92.51	19.36	2.74	.102
BRANCH2X	100.08	14.45	97.37	13.71	0.80	.375
BRANCH3X	105.10	12.27	95.70	11.81	13.07	<b>.001</b>
BRANCH4X	98.85	13.56	90.87	10.11	9.72	<b>.002</b>
A_TOTALX	96.27	16.90	95.10	24.92	0.06	.803
B_TOTALX	100.55	14.20	92.98	15.81	5.38	.023
C_TOTALX	105.87	11.93	105.13	15.91	0.06	.810
D_TOTALX	98.85	11.51	95.01	11.47	2.39	.126
E_TOTALX	101.77	14.86	95.18	14.47	4.32	.041
F_TOTALX	99.65	13.85	94.22	10.05	4.40	.039
G_TOTALX	103.16	12.39	92.45	11.39	17.45	<b>.001</b>
H_TOTALX	99.17	14.23	91.48	10.87	8.05	.006

*With the Bonferroni adjusted critical ratio of 0.003 as the criterion, comparisons between Chinese Singaporeans and Westerners showed no statistical differences for the 15 measures (Table 4.9). Substantively, this means that in this*

*sample of managers the Western and Chinese managers did not differ on all 15 tasks. That is, when East Asian Foreign and non-Chinese Singaporean managers are removed from the comparison between foreign and Singaporean managers, there is no substantive difference in the emotional intelligence abilities of Western and Chinese Singaporean managers.*

Table 4.9 – Comparisons of the emotional intelligence of Western and Chinese Singaporean managers in Singapore.

Measure	Western (N=37)		Chinese (N=40)		F-ratio	p
	Mean	S.D.	Mean	S.D.		
MSCEITOX	94.78	14.27	98.32	13.12	1.28	.261
AREA_EXX	94.24	14.95	98.96	16.58	1.71	.195
AREA_REX	96.94	12.32	98.61	11.78	0.37	.545
BRANCH1X	92.23	16.03	100.33	18.59	4.17	.045
BRANCH2X	98.36	14.07	99.28	13.21	0.09	.767
BRANCH3X	99.46	13.63	102.56	12.62	1.08	.303
BRANCH4X	95.33	11.80	96.00	13.25	0.06	.816
A_TOTALX	92.23	19.53	100.05	21.80	2.73	.102
B_TOTALX	92.84	16.81	101.70	13.55	6.53	.013
C_TOTALX	107.56	14.21	102.92	13.23	2.19	.143
D_TOTALX	95.56	11.53	99.57	9.79	2.73	.103
E_TOTALX	97.83	12.22	99.96	18.14	0.36	.551
F_TOTALX	96.40	13.52	97.90	11.95	0.27	.607
G_TOTALX	97.23	14.18	100.11	11.42	0.97	.327
H_TOTALX	96.73	11.86	95.19	14.47	0.26	.612

Note: Westerners included Australian, European, and American respondents. Chinese are Chinese Singaporean respondents. Excluded from the comparisons were East Asian Foreigners (N=3) and non-Chinese Singaporean respondents (N=6), from Foreign and Local groups respectively, because of the relatively small group size.

**4.3.3 *EASEQuadrant* classification and interpretation of Singapore MSCEIT Emotional Intelligence Quotient (EIQ) Scores (N=86)**

As proposed in chapter 3.7.3, *EASEQuadrant* posits a classification of respondents into four groups based on their Strategic EIQ (AREA\_RXX) and Experiential EIQ (AREA\_EXX) scores considered concurrently. With a cut-off of 100, the respondents were grouped accordingly, resulting in the four groups as shown in table 4.10.

Table 4.10 – *EASEQuadrant* grouping of the Singapore sample individual respondent experiential and strategic MSCEIT concurrent scores.

		Strategic EIQ (AREA_RXX) (x axis)	
		Low	High
Experiential EIQ (AREA_EXX) (y axis)	High	15 (17.5%)	24 (27.9%)
	Low	34 (39.5%)	13 (15.1%)

AREA\_EXX – Experiential emotional intelligence quotient measured by the MSCEIT

AREA\_RXX – Strategic emotional intelligence quotient measured by the MSCEIT

The extent to which the respondents have been successfully classified into one of the four *EASEQuadrant* groups is evidenced by the means for the MSCEIT scales and subscales. Since the scores for Experiential EIQ (AREA\_EXX) and Strategic EIQ (AREA\_REX) are derived from the Branches that are derived, in their turn, from scores for the Tasks, the results shown in table 4.11 are expected. It is worthy noting that the *EASEQuadrant* groups differ, largely, not only at the higher levels but also at the lowest levels of MSCEIT tasks.

Table 4.11 – *EASEQuadrant* grouping of the Singapore sample individual respondent experiential and strategic MSCEIT scores – Means and SDs

Measure	LoE-LoR		LoE-HiR		HiE-LoR		HiE-HiR		F-ratio	p
	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
MSCEITOX	82.73	9.29	94.85	8.83	99.53	5.14	111.13	4.92	67.69	.001
AREA_EXX	83.64	11.62	84.32	11.83	110.08	6.05	110.79	6.40	54.68	.001
AREA_REX	86.52	6.06	107.92	6.30	90.07	6.24	108.68	5.86	83.82	.001
BRANCH1X	83.00	13.79	86.30	16.96	109.09	9.02	109.43	9.23	29.48	.001
BRANCH2X	90.96	12.55	87.66	11.34	108.12	8.14	109.51	7.61	23.56	.001
BRANCH3X	90.22	9.92	109.33	5.39	97.85	9.90	110.42	9.35	27.64	.001
BRANCH4X	87.05	9.67	104.77	8.24	86.82	8.51	104.60	8.38	27.59	.001
A_TOTALX	82.46	16.53	84.65	18.73	108.50	16.75	112.25	15.31	20.10	.001
B_TOTALX	87.47	14.63	85.57	12.57	106.65	6.18	108.87	7.53	24.16	.001
C_TOTALX	99.22	16.38	109.14	7.14	106.34	13.66	111.80	10.19	4.67	.001
D_TOTALX	91.00	12.42	98.79	12.00	98.15	8.84	103.12	7.50	6.51	.001
E_TOTALX	91.00	15.31	96.68	17.91	103.33	12.18	106.17	8.31	6.65	.001
F_TOTALX	89.83	10.23	95.57	13.28	100.53	11.70	104.80	8.76	10.10	.001
G_TOTALX	89.23	10.70	104.63	6.18	92.02	11.26	108.53	9.06	21.98	.001
H_TOTALX	87.42	9.59	106.24	10.51	87.91	10.69	104.28	9.58	21.76	.001

HiR-HiE – High Strategic and Experiential

LoE-HiR – Low Experiential but High Strategic

HiR-LoE – High Strategic but low Experiential

LoR-LoE – Low Strategic and Experiential

It is interesting to compare the four *EASE* *Quadrant* groups in terms of their demographic characteristics, as shown in table 4.12.

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Table 4.12 – *EASE* Quadrant grouping of the Singapore sample – Demographic profiles (Percentages of sub-groups)

<b>High Experiential but Low Strategic (HiE-LoR) (N=15)</b>		<b>High Experiential and Strategic (HiE-HiR) (N=24)</b>	
	%		%
Age (Years)	37.4	Age (Years)	39.8
Sex (Male)	33.3	Sex (Male)	75.0
Education (Degree or higher)	80.0	Education (Degree or higher)	50.0
Managerial level (Senior)	53.3	Managerial level (Senior)	20.8
Nationality (Chinese Singaporean)	66.7	Nationality (Chinese Singaporean)	54.2
<b>Low Experiential and Strategic (LoE-LoR) (N=34)</b>		<b>Low Experiential but High Strategic (LoE-HiR) (N=13)</b>	
	%		%
Age (Years)	40.0	Age (Years)	41.2
Sex (Male)	32.4	Sex (Male)	76.9
Education (Degree or higher)	73.5	Education (Degree or higher)	53.9
Managerial level (Senior)	55.9	Managerial level (Senior)	15.4
Nationality (Chinese Singaporean)	32.4	Nationality (Chinese Singaporean)	46.2

Significance tests were employed to ascertain if there were statistically significant differences among the four groups for each demographic characteristic. No significant differences were found among the groups in age ( $F=.588$ ,  $df$  3,

p=.624) and in education ( $\chi^2 = 11.95$ , df 6, p=.063). There were, however, significant differences in sex ( $\chi^2 = 15.63$ , df 3, p=.001), managerial level ( $\chi^2 = 13.51$ , df 6, p=.036), and nationality ( $\chi^2 = 13.79$ , df 6, p=.032).

The classification of all respondents into four groups based on their Strategic EIQ and Experiential EIQ scores considered concurrently (section 3.7.3) can be depicted using the *EASEQuadrant* plot graph (figure 4.1).

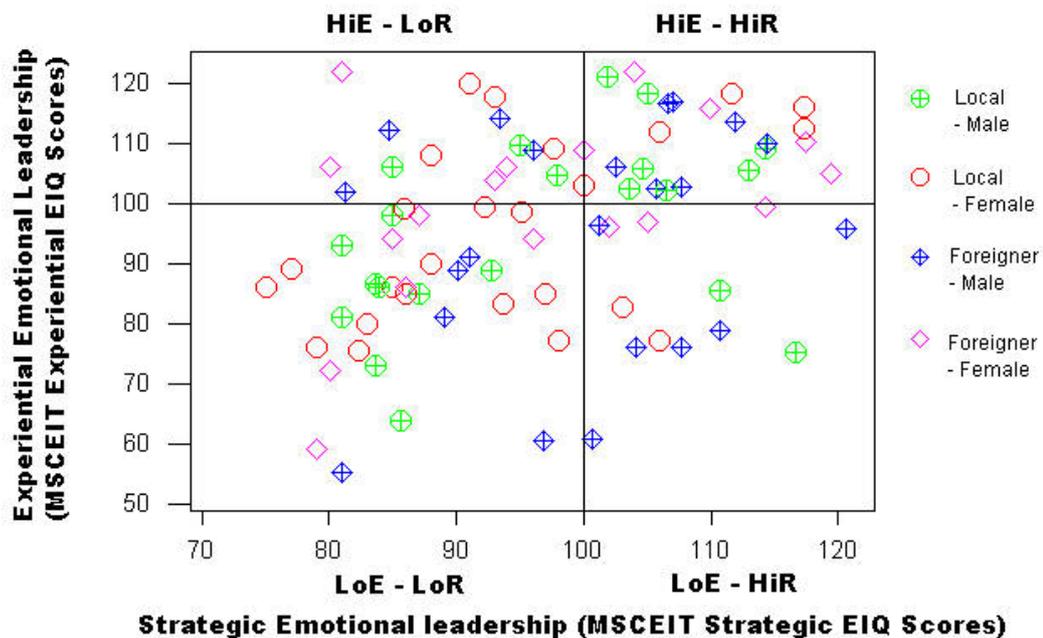


Figure 4.1 – *EASEQuadrant* Plot Graph for interpreting MSCEIT experiential and strategic area emotional intelligence quotient concurrent scores – All Respondents (N=86)

HiR-HiE – High Strategic and Experiential

LoE-HiR – Low Experiential but High Strategic

HiR-LoE – High Strategic but low Experiential

LoR-LoE – Low Strategic and Experiential

The *EASEQuadrant* plot graph shows a higher concentration of respondents in the LoE-LoR (34) or EVALUATE and HiE-HiR (24) EMPHASISE quadrants. There was a lower concentration of respondents in the

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HiE-LoR (15) AFFIRM LoE-HiR (13) STRENGTHEN quadrants. Of the 24 respondents in the HiE-HiR quadrant, 14 were males (seven local, and seven Westerners) and 10 were females (five Singaporean and five Westerners).

This classification of MSCEIT area scores and profiling on the *EASEQuadrant* grid, for a sample group, such as a group of managers in an organisation, enables senior executives to view concurrently the emotional skills of individual managers in comparison to others in the organisation. An executive can see at a glance which manager needs training in, for example, perceiving emotion, developing empathy, emotional blends, or relational management.

*Thus, it was concluded that in this sample of managers a typical Singapore manager who showed emotional wisdom (i.e. is able to apply both emotional knowledge and emotional intelligence) was likely to be around the age of 40, a male, had either high school or university education, occupying middle or junior manager positions, and was perhaps a Chinese Singaporean.*

### **4.3.4 Are emotional intelligence abilities of managers in Singapore related to demographic factors: sex, age, education, and management level?**

Table 4.1 and Appendix B.1 provided the structure and levels of feedback from the MSCEIT V.2.0 (Mayer et al. 2002b, p. 8). Comparisons by sex (table 4.13) showed statistically significant differences ( $p < .05$ ) for MSCEIT (Total EIQ), AREA\_REX (Strategic EIQ), BRANCH3X (Understanding emotion), BRANCH4X (Managing emotion), B\_TOTALX (Using emotion to facilitating thought), F\_TOTALX (Generating sensations – empathy), G\_TOTALX (Understanding emotion blends), and H\_TOTALX (Emotional relations). In all cases where significant differences were observed, male respondents scored higher than did their female counterparts. These findings taken together indicate that male respondents, on average, were more emotionally intelligent-capable. This was the reverse of findings in the North American normative sample where women scored higher than men on all of the scales, although the authors point out that some men score higher than women and some women will score lower than most men (Mayer et al. 2002b, p. 30).

Table 4.13 – Singapore sample demographic factors: Comparisons by sex

Measure	Male (N=44)		Female (N=42)		F-ratio	p
	Mean	S.D.	Mean	S.D.		
MSCEITOX	99.29	13.15	91.36	13.60	7.57	<b>.007</b>
AREA_EXX	97.47	15.62	94.33	17.16	0.79	.377
AREA_REX	102.40	11.41	90.44	9.40	28.01	<b>.001</b>
BRANCH1X	97.28	16.21	93.48	19.16	0.99	.323
BRANCH2X	99.44	14.86	97.79	13.26	0.29	.590
BRANCH3X	105.15	12.40	94.76	11.15	16.65	<b>.001</b>
BRANCH4X	99.19	13.37	89.76	9.27	14.31	<b>.001</b>
A_TOTALX	94.66	17.71	96.69	24.96	0.19	.864
B_TOTALX	99.67	14.96	93.19	15.47	3.90	<b>.052</b>
C_TOTALX	105.76	11.83	105.17	16.32	0.04	.847
D_TOTALX	99.13	11.05	94.35	11.75	3.78	.055
E_TOTALX	100.92	16.11	95.45	13.22	2.95	.090
F_TOTALX	99.47	13.57	93.89	9.97	4.69	<b>.033</b>
G_TOTALX	103.34	12.51	91.24	10.33	23.83	<b>.001</b>
H_TOTALX	99.48	14.25	90.43	9.87	11.61	<b>.001</b>

This comparison was made only by sex, and the findings could have a confounding effect on other demographic variables, such as, age, education, and management level. However, comparisons on these factors are made subsequently.

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Comparisons made among the three age groups (table 4.14) show no statistically significant differences. Thus, it is obvious that emotional intelligence abilities to complete the MSCEIT tasks were independent of age.

Table 4.14 – Singapore sample demographic factors: Comparisons by age

Measure	26-34 (N=29)		35-41 (N=29)		41-62 (N=28)		F-ratio	p
	Mean	SD	Mean	SD	Mean	SD		
MSCEITOX	95.53	15.52	96.67	14.10	94.00	12.11	.26	.772
AREA_EXX	96.54	18.45	98.34	18.14	92.82	11.51	.84	.437
AREA_REX	96.54	11.57	97.07	12.47	96.04	12.43	.05	.950
BRANCH1X	96.50	19.33	97.32	19.87	92.36	13.27	.63	.534
BRANCH2X	98.09	13.38	101.04	13.11	96.70	12.42	.71	.496
BRANCH3X	99.75	12.24	100.82	14.09	99.64	12.56	.07	.930
BRANCH4X	94.09	13.28	95.23	11.11	94.42	13.21	.06	.938
A_TOTALX	98.62	23.58	96.75	23.16	91.42	16.93	.86	.427
B_TOTALX	94.03	18.96	98.53	14.78	97.00	11.94	.63	.537
C_TOTALX	102.41	15.09	106.87	15.40	107.19	11.52	1.03	.361
D_TOTALX	96.62	11.16	100.00	10.97	93.78	12.18	2.04	.136
E_TOTALX	99.22	17.80	98.51	14.09	98.24	14.94	.17	.847
F_TOTALX	97.63	13.63	99.05	10.09	93.44	12.37	1.64	.200
G_TOTALX	98.08	13.38	97.23	14.35	96.96	11.31	.06	.944
H_TOTALX	95.14	14.13	95.14	11.05	95.06	13.06	.01	.995

Comparisons by education (table 4.15) show the three education groups – high school, degree, and post-graduate – to differ with statistical significance in six of the 15 scales or subscales.

Table 4.15 – Singapore sample demographic factors: Comparisons by education

Measure	Postgraduate (N=20)		Degree (N=36)		High school (N=30)		F-ratio	p
	Mean	SD	Mean	SD	Mean	SD		
MSCEITOX	90.40	14.71	90.97	13.70	98.76	12.39	3.35	<b>.040</b>
AREA_EXX	96.56	18.49	94.33	16.88	97.43	14.56	0.31	.737
AREA_REX	100.62	13.64	90.17	9.50	101.52	10.26	10.81	<b>.001</b>
BRANCH1X	98.02	20.45	92.25	17.78	97.51	15.57	1.00	.372
BRANCH2X	98.49	14.40	98.33	13.86	99.08	14.49	0.2	.976
BRANCH3X	103.62	12.49	94.50	10.92	104.40	13.09	6.63	<b>.002</b>
BRANCH4X	98.57	14.18	89.19	9.18	98.39	12.54	6.59	<b>.002</b>
A_TOTALX	96.80	21.30	92.94	24.55	94.53	17.94	0.07	.931
B_TOTALX	99.92	16.72	92.33	15.54	99.23	13.76	2.33	.103
C_TOTALX	104.88	11.27	106.22	16.99	104.96	12.31	0.09	.917
D_TOTALX	100.04	9.65	93.44	12.27	98.66	11.21	2.80	.067
E_TOTALX	98.59	19.50	95.39	11.00	101.44	15.43	1.36	.262
F_TOTALX	97.31	11.38	94.28	10.13	99.33	14.61	1.44	.242
G_TOTALX	102.35	11.05	90.19	10.33	102.83	13.07	12.23	<b>.001</b>
H_TOTALX	97.31	16.62	90.83	9.50	98.62	13.07	3.49	<b>.035</b>

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The pattern of differences (table 4.15) is somewhat complex. First, respondents with only high school education scored higher than did both respondents with degree and postgraduate education. Beyond this, there is a curvilinear relation between education and emotional intelligence ability, with respondents with postgraduate education and those with only high school education scoring higher than those holding a university degree.

This curvilinear relation was found for AREA\_REX (Strategic EIQ), BRANCH3X (Understanding emotion), BRANCH4X (Managing emotion), G\_TOTALX (Understanding emotion blends), and H\_TOTALX (Emotional relations).

The curvilinear relation for education and emotional intelligence ability are discussed further in chapter 5.2.3.

Table 4.16 – Singapore sample demographic factors: Comparisons by management level

Measure	Senior (N=34)		Middle (N=27)		Junior (N=25)		F-ratio	p
	Mean	SD	Mean	SD	Mean	SD		
MSCEITOX	91.15	13.73	97.07	13.70	99.43	13.18	2.98	.056
AREA_EXX	94.50	17.32	95.90	16.70	97.91	15.10	0.31	.736
AREA_REX	90.18	9.06	99.37	13.02	102.20	10.75	10.04	<b>.001</b>
BRANCH1X	92.03	18.15	97.11	18.75	98.23	15.80	1.06	.351
BRANCH2X	98.94	14.03	97.78	13.42	99.13	15.22	0.07	.930
BRANCH3X	94.62	9.91	102.24	13.51	105.13	13.33	6.05	<b>.004</b>
BRANCH4X	89.12	9.34	97.55	14.58	98.82	11.21	6.18	<b>.003</b>
A_TOTALX	96.12	25.13	95.80	21.35	94.84	16.34	0.03	.974
B_TOTALX	92.00	15.91	99.72	15.19	99.15	14.21	2.47	.090
C_TOTALX	107.21	16.70	103.13	12.58	105.64	11.87	0.62	.538
D_TOTALX	93.35	12.15	99.22	10.80	98.87	10.85	2.59	.081
E_TOTALX	95.50	10.25	97.92	18.09	102.33	16.22	1.53	.222
F_TOTALX	94.32	9.61	97.24	12.16	99.50	14.97	1.34	.268
G_TOTALX	90.35	10.56	100.73	10.72	103.49	13.95	10.37	<b>.001</b>
H_TOTALX	90.65	9.64	96.85	16.20	99.11	11.96	3.61	<b>.031</b>

Comparisons by management level (table 4.16) show only five statistical differences among respondents of occupying management levels. The differences

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are found for AREA\_REX (Strategic EIQ), BRANCH3X (Understanding emotion), BRANCH4X (Managing emotion), G\_TOTALX (Understanding emotion blends), and H\_TOTALX (Emotional relations). Comparisons by management level are discussed further in chapter 5.2.3.

*The above results suggest that, while emotional intelligence is independent of age, in this sample, male managers in Singapore tended to be more emotionally intelligent than female managers. At the same time, some specific facets of emotional intelligence were associated with education (though not linearly) and managerial position.*

### 4.3.5 Comparison of MSCEIT V2.0 sample scores with published literature

#### a. Classification of scores table versus Singapore sample

Guidelines for interpreting MSCEIT scores were provided by the MSCEIT user's manual (Mayer et al. 2002b, p. 18). According to the manual, the scores were scaled like IQ scores to a mean of 100 with a standard deviation of 15. The manual provides a classification table (table 4.1 therein) for seven groups according to the scores as those shown in Table 4.17 below.

Table 4.17 – MSCEIT Scores Classification Table

<b>Guidelines for interpreting MSCEIT Scores</b>	
<b>EIQ Range</b>	<b>Qualitative Range</b>
130+	Significant Strength
120-129	Strength
110-119	Competent
100-109	High Average Score
90-99	Low Average Score
70-89	Consider Improvement
69 or less	Consider Development

Using this scheme, the respondents' scores were classified accordingly for MSCEIT Total EIQ (MSCEITOX), Experiential EIQ (AREA\_EXX), and Strategic EIQ (AREA\_REX). Westerner managers (N=37) included respondents whose nationality is Australian, European, or North American. Singaporean managers (N=46) are respondents who are Chinese-Singaporean, Indian-Singaporeans, or Eurasian-Singaporeans. Three East Asian managers in the Foreigners group were excluded from these comparisons, making a sample of 83.

Results are shown in Tables 4.18 to 4.20, respectively. The results enable glimpses of the emotional intelligence of the respondents as compared with that of the North American norms. The percentage of people from the normative data that fell under each of the bands was not available from the publisher and hence a comparison with the American norm was not made. As can be seen in Table 4.18, for MSCEITOX, the highest the respondents reached is the third highest level (Competent) with 19.3% in this class. At the same time, three-quarters of the respondents fell into lower classes, some even in the lowest one.

Table 4.18 – Distribution of respondents for MSCEIT Total EIQ (MSCEITOX) scores classification table

Total EIQ Range	Westerner (N=37) %	Singaporean (N=46) %	Both (N=83) %
Significant strength (130 or more)	-	-	-
Strength (120-129)	-	-	-
Competent (110-119)	21.6	17.4	19.3
High average (100-109)	18.9	32.6	26.5
Low average (90-99)	18.9	17.4	18.1
Consider improvement (70-89)	37.8	28.3	32.5
Consider development (69 or less)	2.7	4.3	3.6

Note: No significant difference between Westerner and Singaporeans ( $\chi^2=2.40$ , df 4,  $p=.663$ )

MSCEITOX – Emotional intelligence quotient total score measured by the MSCEIT

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As shown in Table 4.19, for AREA\_EXX, the highest the respondents reached is the second highest level (Strength) but with only 4.8% in this class. At the same time, one-fifth was in the next class (Competent). Again, almost three-quarters of the respondents fell into lower classes, some even in the lowest one.

Table 4.19 – Distribution of respondents for MSCEIT Experiential EIQ (AREA-EXX) scores classification table

Experiential EIQ Range (AREA_EXX)	Westerner (N=37) %	Singaporean (N=46) %	Both (N=83) %
Significant strength (130 or more)	-	-	-
Strength (120-129)	2.7	6.5	4.8
Competent (110-119)	13.5	19.6	16.9
High average (100-109)	18.9	28.3	24.1
Low average (90-99)	24.3	13.0	18.1
Consider improvement (70-89)	37.8	23.9	30.1
Consider development (69 or less)	2.7	8.7	6.0

Note: No significant difference between Westerner and Singaporeans ( $\chi^2=5.80$ , df 5,  $p=.327$ )

AREA\_EXX – Experiential emotional intelligence quotient measured by the MSCEIT

As Table 4.20 shows, for AREA\_REX, the highest the respondents reached is the second highest level (Strength) but with only a few as 1.2% in this class. At the same time, near one-quarter of respondents was in the next class (Competent). Here again, almost three-quarters of the respondents fell into lower classes, some even in the lowest one.

Table 4.20 – Distribution of respondents for MSCEIT Strategic EIQ (AREA-REX) scores classification table

Strategic EIQ Range (AREA_REX)	Westerner (N=37) %	Singaporean (N=46) %	Both (N=83) %
Significant strength (130 or more)	-	-	-
Strength (120-129)	0.0	2.2	1.2
Competent (110-119)	18.9	15.2	16.9
High average (100-109)	29.7	23.9	26.5
Low average (90-99)	16.2	28.3	22.9
Consider improvement (70-89)	35.1	30.4	32.5
Consider development (69 or less)	-	-	-

Note: No significant difference between Westerner and Singaporeans ( $\chi^2=2.67$ , df 4,  $p=.614$ )

AREA\_RXX – Strategic emotional intelligence quotient measured by the MSCEIT

*It may then be concluded that when compared with respondents involved in the norming of the MSCEIT North American sample, this sample of Singapore managers were generally lower in emotional intelligence in terms of MSCEIT total (MSCEITOX), Experiential EIQ (AREA\_EXX), and Strategic EIQ (AREA\_REX). These differences are not significant; however, the trends indicate that Singaporean managers perform better than their Western counterparts. More Singaporean managers in this sample scored in the low average to competent levels for MSCEIT total EIQ, Experiential EIQ, and Strategic EIQ than did their Western counterparts as compared to the North American sample.*

#### **b. American general consensus norm versus Singapore sample**

The Singapore MSCEIT tests were scored against the North American general consensus norm. Using recent evidence for the MSCEIT's reliability (Table 1, Mayer et al. 2003, p. 102), a comparison was made of the Singapore

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sample means and standard deviations (table 4.21) and reliabilities (table 4.22) with those of the general sample reported in Mayer et al. (2003) Table 1.

Table 4.21 – Comparison of Means (M) and Standard Deviations (SD) of the American general consensus norm versus the Singapore sample

Area score	Branch score	Subtest score	Present study		Mayer (2003) <sup>a</sup>		t-value	p
			M	SD	M	SD		
Total MSCEIT			.48	.07	.48	.07	0.00	NS
Experiential			.48	.09	.47	.08	0.12	NS
	Perceiving		.49	.12	.50	.10	-0.10	NS
		Faces	.48	.16	.50	.12	-0.16	NS
		Pictures	.49	.14	.50	.13	-0.08	NS
	Facilitating		.47	.08	.47	.09	0.00	NS
		Facilitation	.45	.10	.44	.09	0.11	NS
		Sensations	.49	1.0	.50	.12	-0.08	NS
Strategic			.49	.08	.49	.08	0.00	NS
	Understanding		.53	.07	.53	.10	0.00	NS
		Changes	.57	.00	.56	.10	0.10	NS
		Blends	.50	.08	.50	.12	0.00	NS
	Managing		.39	.07	.42	.10	-0.30	NS
		Emotional Mgmt	.39	.07	.41	.09	-0.22	NS
		Emotional Relatns	.40	.09	.43	.12	-0.25	NS

<sup>a</sup> From Table 1 of Mayer et al. (2003) for General Scores. Note: The N for the present study is 86. The N's for the Mayer et al. (2003) study vary from 2004 to 2112; however, with large sample sizes like these, the differences should affect the results substantively.

Table 4.22 – Comparison of Reliabilities of the American general consensus norm versus the Singapore sample

Area score	Branch score	Subtest score	Present study	Mayer (2003) <sup>a</sup>
Total MSCEIT			.91	.93
Experiential			.92	.90
	Perceiving		.91	.91
		Faces	.85	.80
		Pictures	.92	.80
	Facilitating		.73	.79
		Facilitation	.73	.64
		Sensations	.59	.65
Strategic			.76	.88
	Understanding		.70	.80
		Changes	.62	.70
		Blends	.42	.66
	Managing		.70	.83
		Emotional Mgmt	.56	.69
		Emotional Relations	.61	.67

<sup>a</sup> From Table 1 of Mayer et al. (2003) for general consensus scores. The correlation between the two sets of reliabilities is .80 indicating that the measures maintain their relative reliabilities to a large extent.

*It may be concluded that when compared with the MSCEIT V2.0 North American general consensus sample, reported by Mayer and colleagues (Mayer et al. 2003),*

1. *this sample of managers in Singapore did not differ significantly from the American general consensus sample in all MSCEIT total and subscales, and*

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2. *the reliabilities of the MSCEIT when used with this sample of managers in Singapore are highly similar with those obtained from the American general consensus sample.*

### 4.3.6 Summary of results for research question 1

It is concluded, from data received from the MSCEIT test publisher, Multi-Health Systems, Inc., Toronto, Canada, scored from test raw data, that in this sample of managers in Singapore:

1. Managers show an average level of emotional intelligence mental abilities as measured by the MSCEIT scales and subscales.
2. Western managers were more attuned than were their Singaporean counterparts in some though not all facets of emotional intelligence mental abilities, namely, to understand complex emotions and emotional "chains" and manage and regulate emotion in oneself and others.
3. Chinese Singaporean managers were more closely attuned to their Western counterparts in all facets of emotional intelligence mental abilities as measured by the MSCEIT scales and subscales.
4. Managers did not differ significantly from the American general consensus sample in all MSCEIT total and subscales.
5. Profiling using *EASEQuadrant* posits a typical Singapore manager who showed emotional wisdom (i.e, is able to apply both emotional knowledge and emotional intelligence) was likely to be around the age of 40, a male, had either high school or university education, occupying middle or junior manager positions, and was perhaps a Chinese Singaporean.
6. Demographic factors show that while emotional intelligence is independent of age, male managers tended to be more emotionally

intelligent than female managers and some specific facets of emotional intelligence were associated with education (though not linearly) and managerial position.

#### 4.4 Research questionnaire analysis

Five (5) respondents with 10 or more missing data were excluded, thus leaving the sample with 79 respondents' questionnaires for analysis.

Recall from chapter 3 (section 3.4.1) that the literature on emotional intelligence divides between the development of a performance-based measures of emotional abilities and self-report measures of emotional competencies or traits. Hence, parts a-d of questions Nos. 4, 5, and 7 were framed on the four branches of the abilities model of emotional intelligence (Mayer & Salovey 1997) and parts e-i of questions Nos. 4, 5, and 7 were formulated on the emotional competency model of emotional intelligence (Bar-On 1997a) as set out in table 4.23.

Table 4.23 – Emotional ability versus emotional competency components of emotional intelligence

a. Ability to identify emotion	Mental Ability
b. Use of emotion to improve thinking	Mental Ability
c. Ability to recognize emotional chains	Mental Ability
d. Managing emotion in oneself & others	Mental Ability
e. Ability to assess oneself realistically	Emotional Competency
f. Controlling one's feelings and impulses	Emotional Competency
g. Achieving for the sake of achievement	Emotional Competency
h. Nurturing and developing employees	Emotional Competency
i. Effectiveness at managing relationships	Emotional Competency

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Additional data obtained from research questionnaire questions No. 1, 6, and 9 in the form of hand written answers are included in this project as Appendices E.1 – E.3. These data are reported here for completeness and are referred to in the discussion of results (chapter 5) of this thesis.

### **4.4.1 Validity of research questionnaire data**

For each respondent, the scores for the four items in research questionnaire question 4 (a, b, c, and d) were combined to form a total emotional intelligence mental ability score, and items (e, f, g, and i) were likewise summed to form the emotional intelligence competency score. As noted in section 3.4.1 questions Nos 4(h) and 5(h) are omitted as respondents did not answer them. The same method of combining scores was applied to research questionnaire questions Q5 and Q7. These were done to ascertain whether respondents who scored high on the emotional intelligence mental ability (MSCEIT) scales also scored high on the emotional intelligence competency (EQ-i) scales through the use of the Pearson's correlation coefficients.

The correlations (in bold italics) between the MSCEIT ("M") and EQ-i ("E") emotional intelligence test scores (table 4.24) for Questions 4, 5 and 7 are of research interest. Although all three coefficients are moderate in magnitude, they indicate that respondents who score higher on MSCEIT ability items tended to also score higher on EQ-i competency items, thus lending support that the measures were valid.

Table 4.24 – Correlations between MSCEIT ("M") and EQ-i ("E") emotional intelligence test scores

	Q4		Q5		Q7		
	Q4M	Q4E	Q5M	Q5E	Q7M	Q7E	
Means and standard deviations							
Mean	14.82	15.91	17.39	17.56	9.92	13.22	
Std. Dev.	3.80	3.07	2.04	1.96	3.66	3.04	
Inter-correlations							
Q4	Q4M	1.00	<b>.72**</b>	<b>.32**</b>	.09	.20	-.03
	Q4E		1.00	.15	.16	.25*	.06
Q5	Q5M			1.00	<b>.49**</b>	-.06	-.25*
	Q5E				1.00	-.09	-.11
Q7	Q7M					1.00	<b>.52**</b>
	Q7E						1.00

\*\* p<.01, \*p<.05 (two-tailed)

**4.4.2 Research Question 2 – What is the influence of emotional intelligence on organisation effectiveness in Singapore?**

The managers in this sample responded to the questions on various aspects of emotional intelligence on a five-point scale. Thus, the means were tested for significant deviations from the *theoretical* mean of 3.00 by using the one-sample t-test. As there are 36 questions in the survey calling for comparisons to be made, the Bonferroni adjustment was applied so that the family-wise p-value remained to be 0.05. In this case, a difference is required to have a p-value of .001 (i.e., .05/37) to be considered as being statistically significant (bold-faced in Tables 4.25 to 4.29). The view of respondents in this sample of the importance of emotional intelligence for organisation effectiveness is evidenced as shown in table 4.25.

**Research Question 2(i) – In the opinion of managers of corporations in Singapore, have there been sufficient opportunities for managers to increase their emotional intelligence in the work place? [Research Questionnaire: Q2]**

Table 4.25 shows that in the opinion of respondents, opportunities to increase their emotional intelligence were rather limited, as indicated by a mean (Q2) lower than the theoretical mean of 3.00 (with a *negative* t-value). In terms of percentages, practically two-thirds of them indicated that, in their work place, such opportunities were *definitely not enough* (21.5%) or *probably not enough* (44.3%), with only 18% indicating that such opportunities were *probably enough* (10.1%) or *definitely enough* (7.6%).

**Research Question 2(ii) – In the opinion of managers of corporations in Singapore, does emotional intelligence play a role in increasing the competence of people at all levels to enable organisations to compete in world markets? [Research Questionnaire: Q3a]**

Table 4.25 shows that respondents clearly believed that emotional intelligence has a role to play in increasing the competence of people in organisations to compete in world markets. This is indicated by a mean of 4.29 for Q3a, which is significantly higher than the theoretical mean of 3.00 (with a *positive* t-value).

**Research Question 2 (iii) – In the opinion of managers of corporations in Singapore, to what extent should their companies assist managers to increase their knowledge of emotional intelligence? [Research Questionnaire: Q3b]**

As shown in Table 4.25, respondents clearly believed that companies should be willing to assist in increasing knowledge of emotional intelligence among the employees. This is indicated by a mean of 4.31 for Q3b, which is significantly higher than the theoretical mean of 3.00.

**Research Question 2 (iv) – In the opinion of this sample of managers of corporations in Singapore, have their companies been successful implementing emotional intelligence programmes in the work place? [Research Questionnaire: Q3c]**

Respondents (Table 4.25) gave a rather low rating (2.33, being significantly lower than 3.00, the theoretical mean) to their companies' efforts in implementing emotional intelligence.

**Research Question 2 (v) – In the opinion of managers of corporations in Singapore, should companies establish emotional intelligence as a corporate priority? [Research Questionnaire: Q8a]**

As can be seen from Table 4.25, the respondents agreed that companies should give higher priority to emotional intelligence. The mean of 3.9 for Q8a is significantly higher than the theoretical mean of 3.00.

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Table 4.25 – Importance of emotional intelligence in companies for organisation effectiveness

<b>Research Questionnaire No.</b>	<b>Mean</b>	<b>SD</b>	<b>t</b>	<b>p</b>
Q2. Opportunities for increasing emotional intelligence in the work place	2.34	1.16	-5.15	<b>.001</b>
Q3a. Role of emotional intelligence in increasing competence of people at all levels to enable competitiveness	4.29	0.79	11.89	<b>.001</b>
Q3b. Company willingness to increase knowledge of emotional intelligence	4.31	.78	15.13	<b>.001</b>
Q3c. Efforts in implementing emotional intelligence	2.33	1.01	-15.16	<b>.001</b>
Q8a. Companies should establish EI as a corporate priority.	3.90	0.78	10.33	<b>.001</b>

One-sample t-test was used to compare the mean with the theoretical mean of 3 (out of 5). The Bonferroni adjustment was made for multiple comparisons.

### 4.4.3 Summary of results for research question 2

From data received from the research questionnaire, it is therefore concluded that this sample of respondents:

1. Indicated their opportunities to increase their emotional intelligence in the workplace were rather limited,
2. Generally held a strong view of the influence of emotional intelligence in increasing the competence of people in organisations in Singapore to compete in world markets,
3. Agreed that companies in Singapore should be willing to assist managers to increase their knowledge of emotional intelligence,
4. Gave a rather low rating to their companies' efforts in implementing emotional intelligence, and

5. Believed companies should give higher priority to emotional intelligence in their employee value proposition.

It may then be inferred that, in the opinion of this sample of managers of organisations in Singapore, emotional intelligence influenced organisation effectiveness, but that organisations were perceived by their managers as not having placed any priority on implementing emotional intelligence training and awareness programmes in the workplace.

#### **4.4.4 Research Question 3 – How important is emotional intelligence in the workplace for star performance, selection, leadership, team building, appraisal, and training?**

The questionnaire was directed to all managers regardless of whether they were trained in assessing, or are good judges, of emotional intelligence. As stated in chapter 2, at the time of the commencement of this study, July 1999, the literature on emotional intelligence highlighted a dearth of reports on the applied use of EI – the utility of the concept (Ciarrochi et al. 2003). Additionally, at the time of the collection of data for this study (2000-2004) interest in emotional intelligence in Singapore was only just beginning. As an exploratory study, this questionnaire therefore sought to provide respondents with a range of questions in order to gauge the perception (subjective assessment) of managers as to the influence of emotional intelligence on organisation effectiveness and individual success. It is argued in chapter 5 of this thesis that emotional leadership, of which emotional intelligence is one part, is essential to organisation effectiveness and individual success. It was essential to this study therefore to ascertain if managers in this sample supported this hypothesis, tested by research question 3.

The value of these results, inferred from respondent's replies to the questionnaire, is that they summarised the perceptions of managers about emotional intelligence in the work place, providing support for the implementation of training and development in emotional intelligence for managers in Singapore.

**Research Question 3a(i) – Star Performance – In the opinion of managers of corporations in Singapore, do star performers in the work place exhibit high emotional intelligence? [Research Questionnaire: Q4]**

This question was answered by the responses to research questionnaire Q4 (Table 4.26). As table 4.26 shows, the means are all significantly higher than the theoretical mean (that is, 3.00). This indicates that the respondents believed that the star performers in their work place were moderate in their abilities to perceive, use, understand, and manage emotions although they had somewhat higher self-awareness, self-regulation, motivation, and social skills where emotional competencies were concerned.

*It is therefore concluded that, in the view of this sample of respondents, star performers in their work place exhibited emotional intelligence*

Table 4.26 – Managers' beliefs about EI and star performers in their workplace

<b>Research Questionnaire No.</b>	<b>Mean</b>	<b>SD</b>	<b>t</b>	<b>p</b>
4a. Ability to perceive or identify emotion	3.72	1.15	5.65	<b>.001</b>
4b. Ability to use emotion in thought	3.58	0.98	5.38	<b>.001</b>
4c. Ability to understand emotion	3.68	0.98	6.30	<b>.001</b>
4d. Ability to manage emotion	3.84	1.14	6.63	<b>.001</b>
4e. Self-awareness	3.91	0.88	9.37	<b>.001</b>
4f. Self-regulation	3.94	0.88	9.57	<b>.001</b>
4g. Motivation	4.10	1.03	9.59	<b>.001</b>
4i. Social skills	3.96	1.06	8.21	<b>.001</b>

One-sample t-test was used to compare the mean with the theoretical mean of 3 (out of 5). The Bonferroni adjustment was made for multiple comparisons.

**Research Question 3a(ii) – Star Performance – In the opinion of managers of corporations in Singapore, do managers believe emotional intelligence is important for star performance? [Research Questionnaire: Q5]**

This question was answered by the responses to research questionnaire Q5 (Table 4.27). As can be seen from table 4.27, the respondents considered it important to have both emotional abilities and competencies. All ratings for the relevant items were significantly higher than the theoretical mean of 3.00.

A senior executive said,

"We try to measure high potentials in two ways – performance and potential. We measure performers in ways like: have you met your goals, i.e., your job goals. For example, it may be for me to have so many people recruited or this office started up by a certain date. So, are you a person who meets and exceeds your goals?"

Another executive said, on the importance of emotional intelligence for star performance,

"The simple answer is yes. We tend to think about it more in terms of the behaviour competencies. As one moves up to the leadership area as an accountant or engineer it is increasingly important as a key competency."

*It is therefore concluded that this sample of managers believed in the importance of emotional intelligence for star performance in their companies.*

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Table 4.27 – Managers' beliefs on importance of emotional intelligence for star performance in their workplace

<b>Research Questionnaire No.</b>	<b>Mean</b>	<b>SD</b>	<b>t</b>	<b>p</b>
5a. Ability to perceive or identify emotion	4.41	0.59	21.46	<b>.001</b>
5b. Ability to use emotion in thought	4.09	0.70	13.95	<b>.001</b>
5c. Ability to understand emotion	4.33	0.75	16.01	<b>.001</b>
5d. Ability to manage emotion	4.57	0.55	25.80	<b>.001</b>
5e. Self-awareness	4.43	0.67	19.13	<b>.001</b>
5f. Self-regulation	4.25	0.71	15.97	<b>.001</b>
5g. Motivation	4.43	0.67	20.17	<b>.001</b>
5i. Social skills	4.44	0.62	20.97	<b>.001</b>

One-sample t-test was used to compare the mean with the theoretical mean of 3 (out of 5). The Bonferroni adjustment was made for multiple comparisons.

**Research Question 3b(i) – Selection – In the opinion of this sample of managers of corporations in Singapore, what significance do companies give to emotional intelligence in their search for talent? [Research Questionnaire: Q7]**

This question was answered by the responses to research questionnaire Q7 (Table 4.28). In the respondents' opinions, companies and other organizations in Singapore did not accord sufficient significance to emotional intelligence in their search of talent, as three of the means are significantly lower than the theoretical mean of 3.00. Only four of the nine items have ratings higher than 3, one significantly higher, and the remaining three not deviating significantly from 3.00. These four items are emotional competencies, whereas those items with means significantly lower than 3.00 are emotional abilities, suggesting that managers

perceived corporations viewed emotional competencies more important than emotional abilities in their search for talent.

Table 4.28 – Managers' beliefs on the significance given to emotional intelligence on selection and the search for talent by organisations

<b>Research Questionnaire No.</b>	<b>Mean</b>	<b>SD</b>	<b>t</b>	<b>p</b>
7a. Ability to identify emotion	2.28	1.02	-6.24	<b>.001</b>
7b. Use of emotion to improve thinking	2.39	1.09	-5.05	<b>.001</b>
7c. Ability to recognize emotional chains	2.41	1.07	-4.95	<b>.001</b>
7d. Managing emotion in oneself & others	2.88	1.04	-1.08	.284
7e. Ability to assess oneself realistically	3.08	1.32	0.51	.613
7f. Controlling one's feelings and impulses	3.18	1.08	1.45	.150
7g. Achieving for the sake of achievement	3.74	1.05	6.27	<b>.001</b>
7h. Nurturing and developing employees	2.90	0.96	0.93	.356
7i. Effectiveness at managing relationships	3.28	1.06	2.33	.022

One-sample t-test was used to compare the mean with the theoretical mean of 3 (out of 5). The Bonferroni adjustment was made for multiple comparisons.

When interviewed, a senior executive said, in regard to selection,

"We don't specifically use anything called EI. We don't test for it."

A second executive responded,

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"We used competencies for development, not selection, of leaders and key talent. Later training involved managing self and others."

A third executive ventured,

"When we recruit people it's very difficult to assess whether that person will eventually be a director or star performer, based even on fairly comprehensive interviews that we do."

*The reasonable conclusion is that companies and other organizations in this sample in Singapore had not accorded sufficient importance to emotional intelligence in their search for talent.*

### **Research Question 3c & 3d – Leadership and Team Building – In the opinion of managers of corporations in Singapore, is emotional intelligence important for leadership and team building? [Research Questionnaire: Q8d]**

This question was answered by the responses to Q8d (Table 4.29). As can be seen in Table 4.29, the respondents agreed that managers give high recognition as to the importance of emotional intelligence for team building and leadership. This was indicated by the mean of 3.83 for Q8d, which is significantly higher than the theoretical mean.

A senior executive commented, in regard to the importance of emotional intelligence for team building, said that he

"thought emotional intelligence was important but said he would not use an emotional intelligence test in his organisation for leadership development as too many executives misused these instruments to get what they want."

A senior Human Resources executive said, in regard to team building,

"From the HR point of view, my definition of what a good manager is includes (emotional abilities and competencies) because I see more about how they manage people than what their results are in a

business side. So their ability to manage a team and to solve conflict within their team and to manage difficult employees and to motivate good employees are things that I value."

*It may be concluded that managers and senior executives in this sample in Singapore recognise the importance of emotional intelligence in leadership and team building.*

**Research Question 3e – Appraisal – In the opinion of this sample of managers of corporations in Singapore, is emotional intelligence important for promotion? [Research Questionnaire: Q8e]**

Table 4.29 shows that the mean for Q8e is 3.16, not significantly deviating from 3.00. This indicates that the respondents in this sample were ambiguous about managers' beliefs regarding the importance of emotional intelligence for appraisal and promotion.

Commenting about their view of the importance of emotional intelligence for appraisal and retention of managers, one senior executive reported,

"We retain people with money. Support and mentoring would probably become less of a focus. You certainly don't have job for life even though you are a good performer. Money is much important lever now."

Another said,

"We don't have a specific test (for EI). We do customer feedback and we send surveys onto clients. Once an assignment has been completed we receive specific feedback on the consultant."

A third executive revealed,

"Explicit performance appraisal was tied back to performance bonus and promotion. It was an holistic process which was being institutionalised in the organisation's culture."

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*It may be concluded that managers and senior executives had mixed opinions on emotional intelligence being important for appraisal. Some managers saw money being good for getting, retaining, and rewarding people without testing of emotional intelligence. Others indicated testing of emotional intelligence competencies as part of existing psychometric measures was important for appraisal and promotion. No organisations tested directly for emotional intelligence in appraisals.*

### **Research Question 3f – Training – In the opinion of managers of corporations in Singapore:**

**3f (i) – Training opportunities - Should companies provide opportunities in the workplace for managers to increase their knowledge about emotional intelligence? [Research Questionnaire: Q8b]**

As can be seen from table 4.29, the mean for Q8b (3.95) is significantly higher than the theoretical mean indicating that the respondents agreed that companies should provide opportunities to increase knowledge of emotional intelligence in the workplace.

**3f(ii) – Cost of training – Should companies meet the cost of training for emotional intelligence? [Research Questionnaire: Q8c]**

As shown in Table 4.29, the mean (3.68) for Q8c is significantly higher than 3.00, indicating that the respondents agreed that companies should give higher priority and more resources to increase emotional intelligence training.

**3f(iii) – Time off – Should managers allow staff time off from work to study emotional intelligence? [Research Questionnaire: Q8f]**

The respondents were positive about managers' beliefs and action regarding emotional intelligence, as the mean for Q8f (3.40) is significantly higher than the theoretical mean of 3.00 (table 4.29).

**3f(iv) – Learning EI – Do managers generally show little or no interest in learning about emotional intelligence? [Research Questionnaire: Q8g]**

Respondents were of the view that managers in general had little or no interest to learn about emotional intelligence. This is indicated by a mean of 3.63 for Q8g, being significantly higher than 3.00 (table 4.29).

**3f(v) – Passing 'fad' – Do managers feel that emotional intelligence is a 'passing fad'? [Research Questionnaire: Q8h]**

As shown in Table 4.29, the respondents were ambiguous about managers' feelings regarding emotional intelligence, as indicated by a mean of 3.17 for Q8h which is not significantly higher (or lower) than the theoretical mean of 3.00.

Table 4.29 – Managers' perceptions of emotional intelligence in the workplace

Research Questionnaire No.	Mean	SD	t	p
8b. Companies should be willing to provide more opportunities to increase knowledge about EI	3.95	0.67	12.96	<b>.001</b>
8c. Companies should be willing to meet the cost of training for EI.	3.68	0.83	7.33	<b>.001</b>
8d. Managers believe that EI is essential to team building and leadership.	3.83	0.93	8.10	<b>.001</b>
8e. Managers believe that increasing one's knowledge of EI will lead to promotion.	3.16	1.07	1.34	.184
8f. Managers should be willing to allow staff time off from work to study EI	3.40	0.92	3.88	<b>.001</b>
8g. Managers generally show little or no interest in learning about EI.	3.63	0.97	5.97	<b>.001</b>
8h. Managers feel that EI is a passing 'fad'.	3.17	0.94	1.64	.104

One-sample t-test was used to compare the mean with the theoretical mean of 3 (out of 5). The Bonferroni adjustment was made for multiple comparisons.

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*With the findings reported above, it may be concluded that this sample of managers in Singapore:*

- 1. Agreed that emotional intelligence was essential for leadership and team building.*
- 2. Were not sure about the importance of emotional intelligence for appraisal and promotion.*
- 3. Indicated that their companies should provide more opportunities to increase knowledge about emotional intelligence.*
- 4. Believed that their companies should give higher priority and provide more resources to meet the cost of training in emotional intelligence.*
- 5. Grasped the importance of allowing staff time off to study emotional intelligence.*
- 6. Were positive about learning about emotional intelligence.*
- 7. Were not sure whether emotional intelligence was a 'passing fad'.*

### **4.4.5 Summary of results for research question 3**

From data received from the research questionnaire, it is therefore concluded that, in the view of the this sample of respondents:

1. Star performers in their work place exhibited emotionally intelligence and respondents generally held a strong view of the importance of emotional intelligence for star performance in their companies.
2. Companies and other organizations in Singapore had not accorded sufficient importance to emotional intelligence in their search for talent.
3. This sample of managers in Singapore placed reasonable importance on emotional intelligence for leadership and team building, but did not

see emotional intelligence as essential for leadership and team building.

4. Managers in this sample did not see emotional intelligence as being important for appraisal and promotion.
5. This sample of managers:
  - a. Believed their companies should give higher priority to emotional intelligence and provide more resources to meet the cost of training in emotional intelligence
  - b. Saw the importance of allowing staff time off to study emotional intelligence and were generally not passionate about learning about emotional intelligence, yet
  - c. Neither agreed nor disagreed that emotional intelligence was a 'passing fad'.

It may then be inferred that, in the opinion of this sample of managers of organisations in Singapore, managers recognised that emotional intelligence was important for star performance and individual success, but were not engaged fully in embracing and applying emotional intelligence to secure individual performance, leadership and team building skills, promotion, and emotional intelligence learning and development opportunities.

#### **4.5 Supplementary research questionnaire data**

Supplementary qualitative data was collated from answers to research questionnaire, questions 1, 6, and 9. This data generated 176 lines of text. A representation of the answers received from respondents with brief discussion, collated by the author by reading and coding the text, is set out below (table 4.30):

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**Research questionnaire: Q. 1** – What do you understand by the term: Emotional Intelligence (EI)? (See Appendix E.1 for complete list of respondent's answers).

Table 4.30 – What do you understand by the term 'emotional intelligence?'

Response:	Number	%
One's own emotions and the emotions of others	10	12%
Controlling/managing one's own emotions	21	25%
Recognising emotion in others	2	2%
Influencing the emotions of others	14	17%
Being "street smart"	3	3%
Motivating others	4	5%
Communality	4	5%
Management skill	10	12%
Emotion and cognition	4	5%
Beyond IQ	1	1%
Don't know or understand the term	11	13%

**Research questionnaire: Q. 6** – What other significant factors do you believe are also important for star performance in your work place? (See Appendix E.2 for complete list of respondent's answers).

In answer to question 6 of the research questionnaire, respondents provided a vast array of well recognised and established personal, management, team, time management, and leadership skills as well as desired personality traits or characteristics. Respondents advanced little in the way of emotional skills for star performance. Some examples of respondents' replies were:

Ability to manage people across cultures.

Ability to provide mutual support, be considerate of others.

Show commitment, leadership, and organisation ability.

Have clarity and objectivity in analysis of data and situations.

Have right attitude, be persistent, diligent, and have good social skills.

Ability to manage change, prioritise, see the "big picture".

Possess integrity, tenacity, self-belief, drive, and a sense of humour.

Have strong industry knowledge, and knowledge of operational styles.

Excel at team work, communication skills, and work smart.

Be adaptable, less critical and judgemental, and put others at ease.

Have some luck, be at the right place at the right time.

Know the organisation's infrastructure and processes.

Have an ability to make unpopular decisions, without emotion.

Consider the wider organisation. Provide an environment where everyone remotely connected to it can feel part of it.

Other respondents provided different perspectives:

Have an ability to ingratiate yourself with the boss.

In Singapore, obedience, restraint, and the ability to follow orders from superiors and not to think independently are the most important factors in my experience of working for three years with a large Singapore company.

**Research questionnaire: Q. 9** – Is there anything you would like to add that is not included in this questionnaire? (See Appendix E.3 for complete list of respondent's answers).

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Of the 84 respondents, 22 (26%) offered a concluding comment to the research questionnaire (Q.9). One respondent believed his (or her) organisation saw emotional intelligence as a "passing fad". Another did not think "EI made any difference to competitiveness". Another respondent saw emotionally intelligent individuals as people who were "intelligent on all levels". Another suggested that teaching fraternity should "learn about EI and apply it in their classrooms". It was emphasised by some that emotional intelligence relates to culture, and that "EI behaviour can be progressed or be adversely affected by cultural factors". One respondent felt that in his (or her) organisation "opportunity to explore new ideas (such as emotional intelligence) and think beyond themselves is received as 'anti-cultural'", whereas "stars" were treated somewhat differently. In support of emotional intelligence, one respondent said, "Senior management roles are invariably about problem solving, recruitment, and the bottom line. Understanding and implementing EI gives managers an advantage in achieving success within the realms of their job definition".

### *4.5.1 Summary of supplementary research questionnaire data*

A review of hand written answers to questions 1, 6, and 9 of the research questionnaire showed:

1. That 13% of respondents had not heard of the term "emotional intelligence" or understood what it meant. 25% thought it was to do with managing or controlling one's own emotions alone. 17% of respondents indicated it meant influencing the emotions of others, often with the intent of getting some gain. Only 12% of respondents understood that emotional intelligence had to do with one's own and other's emotions.
2. Respondents advanced little in the way of what other emotional skills were required for star performance. Ideas such as better perceiving emotion on the faces of customers, peers, or managers; using empathy to better manage conflict; and understanding emotional chains and

blends, were not forthcoming. These suggestions indicated a high level of knowledge about traditional management terms and practices, and a low level of emotional knowledge and understanding of the impact of emotional intelligence on star performance.

3. In offering their final comments to the survey, respondents were often noncommittal in their answers, indicating perhaps a general lack of knowledge and understanding about what influence and importance emotional intelligence has in organisation effectiveness and individual success.

*It can be concluded from the additional research questionnaire data reviewed that this sample of managers in Singapore did not have a grounded understanding of emotional intelligence as outlined in the literature (section 2).*

#### **4.6 Executive interviews analysis**

The following questions were addressed by interviewees in executive interviews:

In the opinion of senior executives of corporations in Singapore,

5. Is emotional intelligence established in corporate culture? – Research Question: 2(vi).
6. Is the emotional intelligence of managers recognised as adding economic value to their business? – Research Question: 2(vii).
7. Are managers tested for emotional intelligence in corporate staff selection, appraisal, promotion, and retention assessments? – Research Question: 3b(ii).
8. Is the development of emotional intelligence of managers a corporate priority in staff training? – Research Question 3e(vi).

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### 4.6.1 Content analysis

As stated in chapter 3.6a, content analysis is a method for analysing written and oral textual materials (Insch et al. 1997). It was used to determine if emotional intelligence was being applied and implemented in Singapore companies as a feature of regular staff appraisals and as a corporate priority in staff training.

On completion of the content analysis data preparation and collection procedure (section 3.6), a list of 44 keywords (words and phrases) (Appendix E.4) and their frequency was obtained from executive interviews. Of these keywords, only 3 were found to occur five or more times. They were: core values (x 5), goals (x 5), and potential (x 5).

*Based on the content analysis of executive interviews, it can be concluded that there were no patterns or trends of words or phrases on emotional abilities or competencies to indicate that emotional intelligence was established in corporate culture, was adding to economic value, or was being applied and implemented to any significant extent in Singapore companies corporate staff selection, appraisal, promotion, retention, and staff training policies.*

### 4.6.2 Thematic analysis

In addition to content analysis, a thematic analysis (chapter 3.6b) was conducted of the responses to the four questions asked of senior executives above to provide a summary of the main themes that emerged in the respondents' material, including illustrative quotes as supportive evidence. The results of this thematic analysis are what follow.

Brief themes were extracted from each interview. This was done in two stages: (1) Select the text and (2) extract the themes. For example,

(1) The following paragraph is from the original notes of part of an interview:

"We measure performers in ways like have you met your goals, your job goals. For example, it may be for me to have so many people recruited or this office up started by a certain date. So, are you a person who meets and exceeds your goals? The other thing is, what sort of potential do you have to move into larger and more challenging role.

We don't have a specific test. We do customer feedback and we send surveys onto clients. Once an assignment has been completed we receive specific feedback on the consultant or Michael Page. We as part of our management skill, identify whether people are over empathetic or under empathetic. Do we have a specific test for it – no we don't. Are we aware it, absolutely, but we don't necessary go out to gauge it or to test it."

(2) The following themes were then extracted from the above section of the interview (1) and typed into a spreadsheet program with one line per theme.

measure: performers measured by have you met job goals?

potential: for moving into larger or more challenging job roles

testing EI: we don't have a specific test. We do customer feedback on the consultant or company. Use management skill to identify if people over or under empathic.

Thematic extraction from the entire 50 pages of transcript resulted in 131 themes and 5 pages of printout (Appendix E.5). Four general areas into which the themes seem to fall were nominated and numbered as follows:

10 Corporate culture

11 Economic value

12 Measurement

13 Corporate priority

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The spreadsheet was then sorted to produce clusters of themes. The themes that emerged from the responses collected form the basis for reporting results for research questions 2(vi), 2(vii), 3b(ii), and 4f(vi).

### **Research Question 2(vi) – In the opinion of senior executives of corporations in Singapore, is emotional intelligence established in corporate culture?**

Thematic analysis of executive interviews suggested that:

- Emotional intelligence was akin to leadership; how you understand, work, and interact with people and that fast and traditional ways of managing tended to take over with more project planning.
- Organisations need to develop people in the middle of the life cycle of someone's employment.
- Emotional intelligence was embraced conceptually but no big emphasis was put on EI at the moment.
- Emotional intelligence was embedded in existing corporate culture; being right for an organisation is to do with your values, attitude, and the right fit. For example, it was suggested by one executive that a Formula 1 racing driver would be the absolutely wrong person to be an ambulance driver, not only because he would be a dangerous driver, but also may not have the emotional competencies, such as empathy, required of an ambulance driver.
- At the leadership level companies encourage and manage multi cultural and multi disciplinary teams, from which they can learn about rich perspectives, experiences, and insights about the company.

*Some senior executives interviewed for this study agreed that emotional intelligence was important for their organisation but no executive said emotional intelligence was established in corporate culture.*

**Research Question 2(vii) – In the opinion of senior executives of corporations in Singapore, is the emotional intelligence of managers recognised as adding economic value to their business?**

Themes that emerged from executive interviews suggested that:

- The problem was that many executives look upon emotional intelligence as being nice to people, rather than important emotional skills. Cognitive intelligence was favoured over people skills for adding economic value to a business.
- Emotional intelligence emerged as being better understood as a competency rather than a mental ability. When viewed as an ability to manage a team, solve conflict, and motivate good employees emotional intelligence was recognised as adding economic value to their business.
- Competencies including impulse control, interpersonal relationship, and an ability to solve problems were seen as essential for star performers to have.
- Peer assistance and participating in social and internal networks were keys to tapping a group's resources and expertise.
- A leader without emotional intelligence could never be a well-balanced leader. For example, a senior executive believed that most managers in Singapore acknowledged emotional intelligence was important and necessary for a well-balanced leader. He agreed also that emotional intelligence was very important in a person's career promotion.

*In conclusion, emotional intelligence was seen not to influence significantly organisation effectiveness by the respondents to this study.*

**Research Question 3b(ii) – In the opinion of senior executives of corporations in Singapore, are managers tested for emotional intelligence in corporate staff selection, appraisal, promotion, and retention assessments?**

Testing for, or measuring, emotional intelligence was not conducted by any organisation in this sample of senior executives. For example, an executive interviewed said, "We use competencies for development, not selection, of leaders and key talent. Later training involved managing self and others." Another said, "We don't specifically use anything called EI. We don't test for it." From thematic analysis it seemed that testing was centred more around:

- Senior executive appraisals.
- Personality measures, including 360 degree reporting was prevalent when testing was done.
- Measures of performance (eg, KPIs) and job goals, for example, testing for high level of communication skills, developed characteristics for staff success, how staff handle stress, and willingness to socialise.
- Appraisals that did not include tests were conducted by personal and peer interview, individual executive experience and intuition. For example, one executive indicated that it was difficult when recruiting a person to assess whether that person will eventually be a director or star performer, based even on fairly comprehensive interviews that they do. But looking at the Bar-On competencies (Appendix F), he absolutely could not disagree with any one of them being important for any business environment.

Organisation retention policies did not have emotional intelligence built into them. People were most likely retained through:

- Money.
- Technical knowledge and expertise.

- In-house training to meet organisational behavioural competencies or business unit requirements.
- Interest in the job - whether it's what they like best and what they enjoy most.
- Giving staff something exciting to do, letting them be part of something big.

Whilst emotional intelligence concepts were not overtly present in selection, appraisal, promotion, and retention assessments, a story by one executive interviewed provides insight into the value of emotionally intelligent behaviour desired in organisations in Singapore:

"The former general manager of an international hotel gave us a talk and he described this scene. He asked, "If in the morning you walk into the lift and see your neighbour, do you look down to the floor or you look up at the ceiling?" If the hotel manager had a job for Inspector of the ceiling or Inspector of the floor, he will give it to you. But he asked, "If you walk into the lift in the morning and meet your neighbour and your first instinct is to say, 'Hello Mrs Tan. How are things with you? How is your son doing at school?' If you like greeting people and you like meeting people? If you actually feel very comfortable mixing with people?", as a result they want you. That's exactly what we want. If you want to look at the floor or ceiling or you are fascinated about technology and all these kinds of things, we don't care about that. We don't really want you. But if you really genuinely care and you really want to help someone, then yes, we would like to talk to you about coming in. But that's not to say technical ability is not important. But that's the first hurdle you have to get over."

*It may be concluded that organisations in Singapore do not use emotional intelligence tests in the workplace for selection of managers, either in recruitment*

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*or in appraisals for promotion. Senior executives saw emotional intelligence as being more relevant in the middle of the employment life cycle, something that was assessed by "gut feel", intuition, or experience – something akin to one "feeling comfortable" with a person – and generally encompassed in existing psychometric testing.*

### **Research Question 3f(vi) – In the opinion of senior executives of corporations in Singapore, is the development of emotional intelligence of managers a corporate priority in staff training?**

Thematic analysis of executive interviews suggested that:

- Emotional intelligence was not a corporate priority for most senior executives interviewed for this study.
- Emotional intelligence was believed to be difficult to train. One executive said, "If you have it you're lucky. You know, it's like common sense, if you have it good luck to you, if you don't it's difficult to train".
- Another executive believed emotional intelligence was more an opportunity for people to learn from each other's perspective and insights so we can reach the potential of the company.
- One executive said that measuring EI will become more important – "We are in the relationship business so developing empathy is the underlying core. If you develop empathy with someone you can get more business out of them".
- Others believed EI definitely is an underlying aspect of their organisation's training but they are not openly blatant about it. For example, an executive reported, "\$0 was spent directly on EI, but EI was very high on our agenda".

*It may be concluded that corporations in Singapore did not train managers directly in emotional intelligence, but incorporated aspects of emotional intelligence competencies in general training.*

#### **4.6.3 Summary of results for executive interview analysis**

Based on the content and thematic analysis of interviews with seven senior executives, it can be inferred that organisations in this sample of companies in Singapore did not:

1. Instil emotional intelligence as part of corporate culture.
2. Recognise emotional intelligence as adding economic value to their business.
3. Assess managers for emotional intelligence in selection, appraisals, promotion, and retention.
4. Implement emotional intelligence as a corporate priority in staff training.

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## CHAPTER 5

### DISCUSSION

Chapter 5 explains in detail the results of this study according to the research questions posed in chapter 2 and raises some important implications.

The literature on emotional intelligence, reviewed in chapter 2, called for future research in several areas. Salovey & Mayer (1990), the originators of the term "emotional intelligence", suggested that future research may focus on the identification of emotionally intelligent individuals, an examination of the acquisition of emotionally intelligent skills and interventions to promote them, and understanding the role of emotional intelligence in fostering a healthy personality and close relationships. Salovey (1999) recommended that research using ability (performance-based) measures will reveal that emotional intelligence is better characterised by a pattern of underlying strengths and weaknesses across various skills than by a monolithic emotional quotient (EQ).

Future research is likely to address the independence of emotional intelligence from analytical (traditional) intelligence, cultural differences in the definition of emotional intelligence competencies, and leadership effectiveness. One researcher had started exploring ways in which emotional intelligence may contribute to leader effectiveness and suggested that studies could be completed in laboratory settings or in management simulations. She noted that emotional intelligence tests that have been developed, including the MSCEIT (Mayer & Salovey 1997; Mayer et al. 2002b) used in this study, could be employed to measure the emotional intelligence levels of research participants (George 2000).

Goleman argued for leaders of corporations and organisations to be tested in emotional intelligence. He declared that to become an emotionally intelligent leader 'requires that the person realise the downside of their leadership style and their abilities, and that they get an assessment' (Bernhut 2002, p. 15). Other writers recommended that future research be directed to settling on a clear definition for the construct of emotional intelligence, the establishment of

convergent and divergent validity of EI measures across different populations, and the need to look at the independent contribution of emotional intelligence to emotional adaptation (Zeidner, Matthews, & Roberts 2001, pp. 273-274).

Following these researchers, this study has made a significant contribution to the knowledge base in emotional intelligence in two ways:

First, the study contributed to the academic literature by:

1. Reviewing the definition, domain, and utility of the mental ability construct of emotional intelligence (Mayer & Salovey 1997; Salovey & Mayer 1990) to measure the emotional intelligence of managers in Singapore using the MSCEIT psychometric instrument (Mayer, et al. 2002b).
2. The study has developed a tool, *EASEQuadrant*, to classify and interpret emotional intelligence scores measured by the MSCEIT (Mayer, et al. 2002b). It has argued that physiological factors inform an individual manager's emotional intelligence through neurological transmitters and proposed Emotional Leadership Practice (ELP), which incorporate *EASEQuadrant*, as a new framework for the examination, acquisition, development, and applied use of emotional knowledge and skills. Empirical longitudinal research is required to demonstrate the efficacy of the *EASEQuadrant* model.
3. Proposing a national Singapore norm for MSCEIT scores that takes account of cultural differences in the norming of a population sample of emotional intelligence mental abilities.
4. Exploring perceptions of managers and senior executives on the influence and importance of emotional intelligence in the workplace in Singapore; how people think, feel, and act at work.

Second, the study contributed to the applied nature of the mental ability construct of emotional intelligence by the development of a new tool,

*EASEQuadrant* (chapter 3.7), as one component of an integrated theory of Emotional Leadership Practice (ELP), to:

1. Classify and interpret emotional intelligence scores measured by the MSCEIT (Mayer et al. 2002b).
2. Train individual managers in emotional leadership development helping them to understand the role of emotional intelligence in fostering emotional well-being for individual success and organisation effectiveness.

The contributions of this study to the knowledge base in emotional intelligence are discussed in detail.

## **5.1 Explanation of results**

In this study, a population sample (N=86) completed the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer et al. 2002b) to measure emotional intelligence mental abilities. From a systematic analysis of the variables measured by the MSCEIT using descriptive statistics a picture of the emotional intelligence of managers in Singapore emerged. In addition, descriptive statistics, content analysis, and thematic analysis were performed on research questionnaire and executive interview data, respectively. And qualitative analysis was used to draw conclusions and implications from the data sets listed for this study, namely, MSCEIT, questionnaire, and executive interview data (chapter 3.8).

From triangulation of the data sets considered in this study it was concluded in chapter 4 of this thesis that managers in this sample in Singapore have average emotional intelligence mental abilities (chapter 4.3.1) and Western and Chinese Singaporean managers did not differ substantively in emotional intelligence mental abilities (chapter 4.3.2). Profiling of the emotional intelligence scores (chapter 4.3.3) of managers measured by the MSCEIT using *EASEQuadrant* (see chapter 3.7) showed that a typical Singapore manager who

showed emotional wisdom was likely to be around the age of 40, male, had either high school or university education, occupied middle or junior manager positions, and was perhaps a Chinese Singaporean. An analysis of demographic factors (chapter 4.3.4) suggested that in this sample of managers while emotional intelligence is independent of age, male managers tended to be more emotionally intelligent than female managers. A comparison of the sample data with the American norm (chapter 4.3.5) concluded that this sample of Singapore managers were generally lower in emotional intelligence in terms of MSCEIT total, experiential, and strategic EIQ than the North American norm and provided support for the establishment of a Singapore national norm for MSCEIT emotional intelligence scores, considered in chapter 6.4.1.

Additionally, it was concluded in (chapter 4.4.3) that managers in this sample recognised that emotional intelligence influenced organisation effectiveness through their improved emotional skills. And it was determined in (chapter 4.4.4) that most managers recognised that emotional intelligence was important for star performance, selection, leadership, team building, appraisal, and training. However, it was also found that this sample of managers in Singapore did not have a grounded understanding of emotional intelligence as outlined in the literature (chapter 4.5).

Whilst senior executives in this sample agreed with the views of managers, that emotional intelligence was important for their organisations, they did not give priority to the implementation of emotional intelligence in their employee value proposition. And they did not perceive emotional intelligence as adding economic value to the firm (chapter 4.6).

These results are now discussed in detail. This project proceeded to answer three research questions:

Research question one enabled the measurement and comparison of the emotional intelligence of Singaporean managers with international managers. *EASEQuadrant* enabled the profiling of all MSCEIT scores which were then viewed concurrently on the *EASEQuadrant* plot graph, facilitating the analysis of

emotional skills of individual managers in relation to others. Emotional intelligence scores were examined for demographic factors and a comparison was made of Singapore manager scores with the North American norm. This investigation added new knowledge on the identification and level of emotional intelligence of managers in Singapore, something not done previously.

Research question two provided data on the perceived influence of emotional intelligence on organisation effectiveness in Singapore by managers and senior executives utilising the research questionnaire.

Using executive interviews, research question three examined the perceptions managers and senior executives in Singapore have of the importance of emotional intelligence in the workplace for star performance, selection, leadership, team building, appraisal, and training.

Discussion from analysis on triangulation of the data sets considered in this study follows in sections 5.2 – 5.5.

**Section 5.2** – Discussion on Research Question 1 concluded that this sample of managers in Singapore has average emotional intelligence mental abilities. The classification and interpretation of emotional intelligence scores of managers measured by the MSCEIT using the *EASEQuadrant* model is discussed as are demographic variables. Further, a comparison of the sample data with the American norm is considered as providing support for the establishment of a Singapore national norm for MSCEIT emotional intelligence scores.

**Section 5.3** – Discussion on Research Question 2 concluded that managers in this sample recognised that emotional intelligence influenced organisation effectiveness through their improved emotional skills.

**Section 5.4** – Discussion on Research Question 3 determined that most managers in this sample recognised that emotional intelligence was important for star performance, selection, leadership, team building, appraisal, and training. Whilst senior executives agreed with the views of managers, that emotional intelligence was important for their organisations, they did not give priority to the

implementation of emotional intelligence in their employee value proposition. And they did not see emotional intelligence as adding economic value to the firm.

**Section 5.5** – Summary of the discussion.

**5.2 Research Q.1 – How emotionally intelligent are managers in Singapore?**

Research Question 1 was a search for emotionally intelligent managers in Singapore, measuring the emotional intelligence of managers using the mental ability model of emotional intelligence psychometric instrument, the MSCEIT. The emotional intelligence of local Singaporean managers was then compared with that of Western managers in Singapore to examine if there was a difference in their levels of emotional intelligence, which may favour local Singaporean managers over foreign talent or vice versa. MSCEIT area scores of respondents were profiled using *EASEQuadrant*, demographic variables were considered, and an analysis conducted of the MSCEIT scores of managers in this sample with the North American population norm.

**5.2.1 Summary of literature review and quantitative results**

It was concluded in chapter two that emotions inform our intelligence in a biological-psychological model, recognised as emotional intelligence, which predicted important outcomes for organisation success and individual performance (Bar-On 1997a, b, 2000; Boyatzis et al. 2000; Brackett & Mayer 2003; Dulewicz & Higgs 2000; Dulewicz et al. 2003; Goleman 1995, 1998a, 2001b; Higgs & Dulewicz 1999; Mayer 2000b; Mayer & Salovey 1997; Mayer et al. 2000a; Mayer et al. 2001; Palmer, 2003a; Palmer & Stough, 2001, 2005; Salovey et al. 2000; Salovey & Mayer, 1990). Whilst Mayer (2005) does speak out against extravagant claims that emotional intelligence predicts success he does nevertheless argue that it seems to predict important outcomes. When emotional

intelligence is learned and nurtured by people it influences positively not only their intrapersonal behaviour, but also interpersonal relationships in the workplace.

The research literature claimed that Mayer and colleagues' assessment tool, the MSCEIT (Mayer et al. 2002b) measured a distinct mental ability – the capacity to reason, in regard to emotions, and the capacity to use emotion to assist cognition. 'The MSCEIT is, indeed, a convenient-to-administer test that is highly reliable at the total-score, area, and branch levels, and provides a reasonably valid measure of EI in many psychometric senses of the word *valid*' (Mayer et al. 2004a, p. 211). This mental ability model of emotional intelligence (Mayer & Salovey, 1997) predicted important life criteria (Brackett & Mayer 2003). Therefore, it was concluded that it would be useful to measure the emotional intelligence of managers in Singapore using the MSCEIT over a wide range of age groups and cultures to identify emotionally intelligent individuals and provide data for a national Singapore norm on emotional intelligence.

The results of testing managers in Singapore (N=86) for emotional intelligence were that:

7. *This sample of managers in Singapore showed an average level of emotional intelligence mental abilities as measured by the MSCEIT scales and subscales (chapter 4.3.1).*
8. *In this sample of managers the Western and Chinese managers did not differ on all 15 tasks. That is, when non-Chinese Singaporean managers are removed from the comparison with Western managers, there is no substantive difference in the emotional intelligence abilities of Western and Chinese Singaporean managers (chapter 4.3.2).*

But a fuller explanation of these results is required to advance the notion that measurement of the emotional intelligence of managers in organisations is a worthwhile endeavour that may predict success. Therefore, this study:

1. Developed a tool for profiling emotional intelligence scores, namely, *EASEQuadrant* (chapter 3.7) – a theoretical model for explaining (classifying and interpreting) emotional intelligence scores measured by the MSCEIT. In this study, an individual manager's MSCEIT area EIQ scores were profiled on the *EASEQuadrant* grid (chapter 3.7.3), which provided an interpretation of the manager's experiential and strategic emotional abilities, discussed in section 5.2.2.
2. Reviewed whether emotional intelligence abilities of managers in this sample in Singapore are related to demographic factors, such as, sex, age, education, and management level, discussed in section 5.2.3.
3. Conducted a comparison of MSCEIT V2.0 sample scores with published literature, discussed in section 5.2.4.

### **5.2.2 *EASEQuadrant* – A tool for classifying and interpreting emotional intelligence scores measured by the MSCEIT**

The literature reviewed for this project in chapter two detailed a structural and descriptive approach to the theory of emotional intelligence. Matthews, et al. (2002) argued that an **explanation** of emotional intelligence is required; 'Understanding EI in more depth entails identifying psychological processes that control the outcome of emotionally significant encounters' (p. 25). *EASEQuadrant* was proposed in this thesis as a model to explain emotional intelligence as measured by the MSCEIT.

It was stated in chapter two (section 2.4) that leadership was about a long-term feeling of trust (Mann, 2003, p. 19). From this premise it was argued that emotional leadership is learning and applying emotionally intelligent behaviours

that gain that long-term feeling of trust in business, professional, and social relationships (Gosling & Gosling, 2004). The literature reviewed (chapter 2.4.3c) supported the view that emotional intelligence was important for leadership education and development in organisations.

This thesis advanced *EASEQuadrant* (Gosling & Gosling, 2004, pp. 287-301) in chapter 3.7 as:

1. A theoretical framework for classifying and interpreting emotional intelligence scores measured by the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer et al. 1999; Appendix B.1), and
2. A proposed eight-stage programme of emotional leadership to develop emotionally intelligent behaviour in managers and senior executives in the workplace.

*EASEQuadrant* is a programme created for this study to help managers and executives move from an "outside-in" to an "inside-out" paradigm; from what one *has to do* and what *has to happen* to become emotionally intelligent, to *how* to feel and behave with emotional intelligence.

For example, Brown (2005) revealed that Holden used the HayGroup ECI tool in its leadership programmes at Mt Eliza Business School and the Genos-360 instrument for assessment along with behavioural interviews. Brown reported that the HR director, organisational capability, at Holden, said:

The aim (of the ECI) is to introduce leaders to the concept of emotional intelligence, to help them understand their own level of emotional intelligence, how it impacts leadership and to formulate an action plan to develop it.

Human resource consultants often see emotional intelligence as a measure for identifying potential effective job candidates and as a tool for developing workplace skills;

In the work place, emotional intelligence has been found to contribute to: networking abilities, listening and oral communication skills, stress tolerance and adaptability, conflict management, building healthy trusting relationships with clients and colleagues, teamwork effectiveness, skills at negotiating agreements, the ability to lead, motivate and foster positive attitudes with and amongst employees (Genos 2005).

It is one thing to teach managers the "what to do" and "what has to happen" aspects of emotional intelligence: networking abilities, conflict resolution, and teamwork effectiveness. There are many training programmes doing just that. It is more difficult to teach managers *how* to behave with emotional intelligence empowering them to take ownership of the emotional skills and competencies through feeling the impact of them in their bodies. The author argues in this thesis that ownership of emotional skills will be the internal motivator for managers to practise emotionally intelligent behaviour, not traditional external motivators such as money, although monetary rewards do follow improvements in emotionally intelligent behaviour in the workplace (see Case history, chapter 5.6.2)

For example, imagine a manager teaching a subordinate about empathy. Existing courses in emotional intelligence will teach managers that you need to be able to stand in someone else's shoes and see things from their perspective (what to do) and then practise active, or reflective, listening skills (what has to happen) and focus on the person, not the problem. The manager's own emotional knowledge and individual experience of empathy is often not canvassed or dealt with. If the manager's MSCEIT emotional intelligence test score for "sensations" (Branch 2, Task 4 of the MSCEIT) is low, it is an indication that he or she has little mental ability to generate empathy. How could such a manager possibly extend empathy to a subordinate, let alone teach about empathy, when he or she has no mental ability to use empathy to facilitate thought?

By contrast, the proposed *EASEQuadrant* framework teaches managers what to do and what is to happen, but most importantly, and in addition, explains *how* to do it. The programme, detailed in chapter 3.7, profiles MSCEIT area scores, which highlight areas for development, and teaches a person how to behave when he or she doesn't know what to do, using his or her emotional knowledge, emotional style, and emotional intelligence. The programme teaches the biology of how emotions are generated and the physiological impact of negative emotions (stress) felt in the body lowering self-esteem. *EASEQuadrant* helps leaders identify and understand the psychological processes that control the outcome of emotionally significant encounters, as suggested by Matthews et al. (2002).

*EASEQuadrant* is the unique contribution of this study to furthering the explanation of emotional intelligence to individuals not accustomed to academic literature. *EASEQuadrant* is the author's vision of how emotional intelligence may be applied to everyday living enabling leaders to exercise a strategy of emotional leadership in their relationships in the home, community, and workplace.

A further example will consolidate the *EASEQuadrant* programme goals. In order to teach conflict resolution it is not just how you negotiate and listen to another's perspective and come to a consensus – the what to do and what is to happen. The *EASEQuadrant* programme teaches *how* to deal with your reaction to conflict, i.e., how you feel about the conflict. You examine what your reaction is and what emotional style you use, i.e., sensitive versus reactive, to feel your reaction in your body. You learn how to use this new emotional knowledge to change your perception and respond as the person you want to be. This choice to behave differently with emotional intelligence in turn raises lowered self-esteem. A person begins to see things more rationally and realistically and can be more empathetic to someone else's perspective. Lowered self-esteem is accompanied by negativity and pain – a person is trapped in his or her point of view. Emotionally intelligent behaviour increases positive emotion, lowers adrenalin, and raises self-esteem enabling a person to move from his or her point of view to their viewing

point. As stated earlier, empirical longitudinal research is required to demonstrate the efficacy of this program.

Starting with the manager's MSCEIT scores, their current emotional landscape, the *EASEQuadrant* programme helps a manager develop his or her emotional knowledge, emotional style, and emotional intelligence facilitated by the *EASEQuadrant* grid (figure 3.3) to explain his or her current and future level of emotional intelligence. As explained above, the *EASEQuadrant* is a model for interpreting and explaining emotional intelligence abilities scored using the MSCEIT. The *EASEQuadrant* grid is a matrix for emotionally intelligent leadership. Set on two axes of experiential emotional leadership and strategic emotional leadership, the grid comprises four quadrants. Each quadrant is a right of passage along one's journey to learning emotional knowledge and applying emotionally intelligent behaviour to build a long-term feeling of trust in relationships.

Managers plot their MSCEIT experiential EIQ area score and strategic EIQ area score on the *EASEQuadrant* grid, on the experiential emotional leadership and strategic emotional leadership axes, respectively. The point at which a manager's experiential EIQ area score and strategic EIQ area score cross is where they sit in their journey toward practising emotional leadership, that is, behaving with emotional intelligence. The goal of each person is to achieve a meeting of their MSCEIT experiential EIQ area score and strategic EIQ area score in the top right hand corner of the *EASEQuadrant*; point **x**.

At point **x** on the *EASEQuadrant* grid a person demonstrates emotional wisdom; possessing significant strength in both experiential and strategic emotional intelligence. If scores cross at this point it is argued that it is highly likely that the manager is a person who exhibits consistent emotionally intelligent behaviour valued of an effective leader – someone who builds a feeling of long-term feeling of trust in business, professional, and social relationships. A score at point **x** on the *EASEQuadrant* grid is a person exercising a strategy of emotional leadership – behaving with emotional intelligence.

In this study, all managers had EIQ area scores crossing other than at point **x** (see figure 3.3). Acknowledgment of where his or her EIQ area scores cross on the *EASEQuadrant* grid provides a manager the opportunity to recognise deficiencies in his or her emotional intelligence landscape and begin the quest to develop emotional skills.

It has been shown (chapter 4.3.3) that any group of managers' scores can be viewed concurrently on an *EASEQuadrant* plot graph to show concentrations of managers in any particular quadrant. As explained in chapter 3.7, emotional leadership development using the *EASEQuadrant* model requires a manager to move progressively through each of the four EASE quadrants to become emotionally intelligent. The value of an *EASEQuadrant* plot graph is that an organisation can see at a glance where individual managers sit in their overall emotional abilities in comparison to others in the organisation. A chief executive or senior level executive can see at a glance which manager needs training and in which areas, such as, perceiving emotion, developing empathy, understanding emotional blends, or relational management.

But *EASEQuadrant* is more than a tool to profile MSCEIT area scores. A central element underlying emotional intelligence (Matthews et al. 2002, p. 27) and *EASEQuadrant* (Gosling & Gosling 2004) is the impetus to improve emotional functioning in real life; to elevate emotional well-being (see Gosling & Gosling 2004, pp. 292-301 for examples of how emotional intelligence can be applied to everyday living). *EASEQuadrant* is a workshop, a training tool that helps people measure, learn, and apply emotional intelligence in relationships, through eight stages of emotional leadership, to enrich the lives of individuals and organisations. It is likely that once a manager has completed *EASEQuadrant* Workshop, including learning emotional knowledge, analysing one's emotional style, and developing emotional intelligence skills using the MSCEIT, he or she will have learned how to elevate his emotional well-being and that of others in his or her team. A natural consequence of emotionally engaged and emotionally intelligent employees is increased performance and organisation effectiveness.

Ongoing testing and evaluation in a longitudinal study to confirm the efficacy and validity of the programme is proposed in chapter 6.4.2.

In a study by Cavallo & Brienza (2004) of the Johnson & Johnson Consumer & Personal Care Group globally, involving more than fourteen hundred employees in thirty seven countries, it was found that emotional competencies differentiate successful leaders and that emotional intelligence, as one of a broad spectrum of skills which managers have in varying levels, can and is being developed systematically in Johnson & Johnson's Consumer Companies as a part of that group's Standards of Leadership. The study held that, 'the highest performing managers have significantly more "emotional competence" than other managers'.

As discussed in chapter 3 (section 3.7.2b), on teaching emotional knowledge, the authors of the MSCEIT believe that emotional intelligence is a part of personality and a distinction can be drawn between emotional intelligence and emotional knowledge. It is possible to learn about emotions, and the more learning one has, the better one may perform in the area of emotional reasoning.

Gosling & Gosling (2004) argued that managers who exercised emotional leadership in whatever role they find themselves – management, administration, and leadership – would be behaving as emotionally intelligent leaders. Managers who wanted to be emotionally intelligent leaders had a responsibility to exercise a strategy of emotional leadership in their interactions with others, assisting them to gain emotional knowledge, understand their emotional style, and nurture emotionally intelligent behaviour.

The emotionally intelligent leader is able to exercise emotional leadership only if he or she is emotionally intelligent – has a capacity to identify, use, understand, and manage emotion in themselves and in others. *EASEQuadrant* model enables the classification and interpretation of the emotional intelligence scores of managers in this sample as assessed by the MSCEIT emotional intelligence test and provides a training module for the development of emotional

leadership in the future, building emotional skills to equip managers for superior performance and leadership development activities within an organisation.

### **5.2.3 Review of the relationship between the emotional intelligence abilities of managers in this sample in Singapore and demographic factors**

Descriptive statistics were conducted on the MSCEIT psychometric tool data sets (chapter 3.8) to report if any significant differences were observed due to demographic factors such as sex, age, education, and management level. As reported in chapter 4.3.4, in all cases where significant differences were observed:

- a. Male respondents scored higher than did their female counterparts. The findings taken together indicate that male respondents, on average, were more emotionally intelligent-capable. This was the reverse of findings in the North American normative sample where women scored higher than men on all of the scales.
- b. Emotional intelligence abilities to complete the MSCEIT tasks were independent of age.
- c. Comparisons by education show the three education groups – high school, degree, and post-graduate – to differ with statistical significance in six of the 15 scales or subscales. A curvilinear relation was found between education and emotional intelligence ability, with respondents with postgraduate education and those with only high school education scoring higher than those holding a university degree. This curvilinear relation was found for strategic EIQ, understanding emotion, managing emotion, understanding emotion blends, and emotional relations scores. It is possible that respondents with postgraduate education have had more opportunity to study and work with social learning, psychological, and behavioural theories to render higher scores in emotional intelligence abilities.

Why respondents with only high school education should score higher in emotional intelligence is less clear, but is possibly due to them enjoying greater life experience in dealing with emotional issues. Another reason may be that interest in the emotional intelligence concept 'implies (to some) that people without much academic ability may still be highly successful in life if they are high in EI' (Ciarrochi, Chan, Caputi & Roberts et al. 2001, p. xi).

- d. Comparisons by management level (table 4.16) show only five statistical differences among respondents of occupying management levels. The differences are found for strategic EIQ, understanding emotion, managing emotion, understanding emotion blends, and emotional relations.

It is noteworthy that it is the junior managers who scored significantly higher than their more senior counterparts. These scores suggest that junior managers were more capable in emotional intelligence and were more able to complete some of the MSCEIT tasks, especially understanding emotion blends, and emotional relations. As will be discussed in the questionnaire and executive interview sections (sections 5.3 and 5.4), the reluctance of middle and senior managers to learn and apply emotional intelligence may prevent them from attaining higher task scores. Recall from chapter 2 the absence of quantitative studies on top leaders may be due to a taboo – 'CEOs and others who hold power are resistant to allowing themselves to be assessed by objective measures, including IQ tests' (Emmerling & Goleman 2003, p. 6).

*The above results suggest that, while emotional intelligence is independent of age, in this sample, male managers in Singapore tended to be more emotionally intelligent than female managers. At the same time, some specific facets of emotional intelligence were associated with education (though not linearly) and managerial position.*

*In summary, the results of this analysis suggest that in this sample of managers in Singapore, while emotional intelligence is independent of age, male managers tended to be more emotionally intelligent than female managers. At the same time, some specific facets of emotional intelligence were associated with education (though not linearly) and managerial position.*

#### **5.2.4 Comparison of MSCEIT V2.0 sample scores with published literature**

##### **a. Comparison using classification of scores table**

When respondents' MSCEIT scores in this sample were classified according to the MSCEIT user's manual (Mayer et al. 2002b, p. 18) (chapter 4.3.5a), it was concluded that managers were generally lower in emotional intelligence in terms of MSCEIT total EIQ, Experiential EIQ, and Strategic EIQ than the North American norming sample. More Singaporean managers in this sample scored in the low average to competent levels for MSCEIT total EIQ and experiential EIQ than did their Western counterparts as compared to the North American sample. More Western managers scored in the low average to competent levels for strategic EIQ than did their Singaporean counterparts.

##### **b. American general consensus norm versus Singapore sample**

Mayer et al. (2002b) report that normative data for the MSCEIT is based on collection of data (N=5000) from over 50 research sites, the majority from the US, but also data collected from other countries, '... including the United Kingdom, Canada, Malta, South Africa, Australia, Switzerland, Scotland, the Philippines, India, Slovenia, and Sri Lanka' (p. 29).

The norming of national Singaporean MSCEIT scores for comparison of local individual scores is preferred, rather than comparing local scores with the largely North American general consensus norm. This is because it is argued

(Mayer, Salovey & Caruso, 2002b) that cultural aspects are better reflected in a national norm.

Scoring of the MSCEIT is based on North American data. People from emerging or non-Western nations taking the test, and non-native English speakers, should be alert to the fact that cultural variation can lower scores on the MSCEIT, and should check local norms where available (Mayer, Salovey & Caruso 2002b, p. 80).

In the absence of an existing Singapore norm for the MSCEIT, it is appropriate to make a comparison of the Singapore MSCEIT scores with the American general consensus norm, being mindful of the absence of local Singaporean cultural factors from the American general consensus sample scores.

A comparison of the Singapore sample mean and standard deviation with the American norm consensus general mean and standard deviation was conducted to highlight the need for future research to establish a Singapore national norm from emotional intelligence scores. Specifically, this comparison enquired as to whether the total, area, branch, and task score means of the Singapore sample of MSCEIT emotional intelligence scores of Singaporean and Western managers was comparable to the total, area, branch, and task score means of the MSCEIT Version 2.0 general consensus scores. The results (reported in chapter 4.3.5b) of this comparison were that when compared with the MSCEIT V2.0 North American general consensus sample, reported by Mayer and colleagues (Mayer et al. 2003):

3. *This sample of managers in Singapore did not differ significantly from the American general consensus sample in all MSCEIT total and subscales, and*
4. *The reliabilities of the MSCEIT when used with this sample of Singapore managers are highly similar with those obtained from the American general consensus sample.*

The results of these two modes of comparison suggest that whilst the Singaporean managers were compared with the general consensus sample in

North America, it is unlikely that Singaporean managers in this sample will differ significantly in emotional intelligence as compared to international managers.

### 5.2.5 Summary of Research Q.1

In conclusion, analysis of research question one found that in this sample of managers in Singapore, managers were of average emotional intelligence and that there was no substantive difference in the emotional intelligence abilities of Western and Chinese Singaporean managers when measured by the MSCEIT scales and subscales.

*EASEQuadrant* profiling concluded that a typical Singapore manager who showed emotional wisdom (i.e, was able to apply emotional intelligence) was likely to be around the age of 40, a male, had either high school or university education, occupying middle or junior manager positions, and was perhaps a Chinese Singaporean. *EASEQuadrant* also provided a model for the development of emotional leadership to equip managers for superior performance and organisation effectiveness.

Furthermore, the emotional intelligence measured for this sample of managers in Singapore did not differ significantly in regard to demographic factors or from the American general consensus sample in all MSCEIT total and subscales, and the reliabilities of the MSCEIT were highly similar with those obtained from the North American general consensus sample. However, as mentioned previously (chapter 4.3.4), results obtained from the Singaporean sample are different from the North American sample with respect to gender. In the North American sample women scored higher. In the Singapore sample men scored higher.

'Emotional intelligence cuts across the gender gap. Over and over again ... men and women have remarkably similar overall scores on the EQ-i' (Stein & Book 2000, p. 5). One study found that females scored 'significantly higher [than males] in interpersonal relationships and empathy' (Stein & Book 2000, p. 241).

Mayer, et al. (1999) reported that women were better at reading, perceiving, and memory whilst men performed better in the sciences, leading to speculation that women were better at emotional intelligence. Mayer, et al. (2002b) reported that in the North American norm of MSCEIT scores women scored slightly higher than men on all of the scales of the MSCEIT. The largest difference came in the Managing Emotions branch and the smallest difference was in the Changes task. Mayer, et al. (2004) argued, 'Although on average women do score higher than men [in emotional intelligence], it is worth remembering that some men will score higher than most women, and that some women will score lower than most men' (Mayer, et al. 2004, p. 30).

There is a lack of research on the differences between the emotional intelligence of men and women. Palmer, Gignac, Manocha & Stough (2005) pointed out

Research on EI in general has yet to address gender differences in more detail, despite the potential incremental understanding about the nature of the construct that might result. A better understanding about the nature and causes of gender differences in EI might, for example, help delineate the underlying biology, heritability, and nature of cultural and environmental influences on EI (Palmer et al. 2005, p. 302).

Whilst this study cannot provide further insights into these differences, it raises interesting issues for future research.

### **5.3 Research Q.2 – What is the influence of emotional intelligence on organisation effectiveness in Singapore?**

Research Question 2 provided data on the perceptions of managers and senior executives on the influence of emotional intelligence on organisation effectiveness in Singapore.

It was concluded in chapter two that research showed emotional intelligence was vital for the future development of team building, leadership, and management in corporations, government, and other organisations. Cherniss

(2001) said, 'Look deeply at almost any factor that influences organisational effectiveness, and you will find that emotional intelligence plays a role' (p. 4).

Emotional intelligence has become a recognised factor in leadership and management for a number of reasons: emotional abilities predict important outcomes, are essential to self management and social management, emotional competencies identify star performers, emotional intelligence is an individual-difference variable that moderates stimulus-behaviour linkages in workplace stress, and retaining emotionally intelligent people is the key to an organisation adding economic value (Caruso & Salovey 2004; Cherniss 2004; Cherniss & Adler 2000; Cherniss & Goleman 2001; Goleman 1995, 1998a, b, 2000a, b, 2004; Goleman et al. 2001; Hay Group, 1999a, b, 2005; Jordan, Ashkanasy & Hartel 2002; Mayer, Caruso & Salovey 1999; Stein & Book 2000; Weisinger 1998).

**a. Research questionnaire results**

From quantitative analysis of data received from the research questionnaire (chapter 4.4.2) it was concluded that respondents:

6. Believed their opportunities to increase their emotional intelligence in the workplace were rather limited.
7. Generally held a strong view of the influence of emotional intelligence in increasing the competence of people in organisations in Singapore to compete in world markets.
8. Agreed that companies in Singapore should be willing to assist managers to increase their knowledge of emotional intelligence.
9. Gave a rather low rating to their companies' efforts in implementing emotional intelligence.
10. Believed companies should give higher priority to emotional intelligence in their employee value proposition.

It was inferred from quantitative analysis of the research questionnaire that, in the opinion of managers of organisations in Singapore, emotional intelligence influenced organisation effectiveness, but that organisations were perceived by their managers as not having placed any priority on implementing emotional intelligence training and awareness programmes in the workplace. In conclusion, quantitative analysis showed that managers perceived emotional intelligence had little influence and needed higher priority in their corporations in Singapore.

From analysis of supplementary qualitative data from the research questionnaire (chapter 4.5.1) it was concluded that managers in Singapore do not have a grounded understanding of emotional intelligence as outlined in the literature (section 2). For example, it was found that only 12% of respondents understood that emotional intelligence had to do with one's own and other's emotions. Secondly, respondents advanced little in the way of what other emotional skills were required for star performance. Finally, respondents showed a general lack of knowledge and understanding about what influence and importance emotional intelligence has in organisation effectiveness and individual success. It can be inferred from these observations that much work is to be done to first raise the awareness of individual managers about emotions and emotional knowledge before serious work on developing emotional intelligence can begin.

**b. Executive interview results**

At the outset, some senior executives interviewed for this study sought clarity as to what was meant formally by emotional intelligence. For example, initial comments or questions from executives included:

Many of us look upon EI as being nice to people.

Is using different leadership styles a form of emotional intelligence?

Is EI within the framework of IQ or is it something different?

Can you give me a broad perspective of what EI is?

Thematic analysis of executive interviews (chapter 4.6.2) established that emotional intelligence was considered by many senior executives to be embraced at least conceptually by their organisations, even tested for implicitly in personality and 360 degree management measures. However, the author did not discover any evidence that the direct measurement or application of emotional intelligence abilities or competencies have been established formally by any organisation in this study.

Asked if he agreed that emotional abilities and competencies were established in corporate culture in his organisation, one executive said,

"I think so and also I feel that when people are in drastic different emotions they tend to pull in opposite directions so you need people with right thinking, attitude and emotions to work as a team. I think the important thing is to be able to work as a team. I have the experience that intelligence is important but some people with a certain level of intelligence no matter how it goes out there you have problems in getting them to do the right thing. Low IQ takes a much longer time to get the job done.

My general impression is that local companies in Singapore see emotional intelligence as important."

Asked about emotional intelligence being established in corporate culture, senior executives agreed generally that emotional intelligence was important for their organisations but no executive said emotional intelligence was established in corporate culture.

A senior executive said he agreed with the statement that if you increase the emotional intelligence of a star performer you would maximise his or her economic value. But, he said,

"I'll tell you what the problem is. Many of us look upon EI as being nice to people. Many Singapore managers look upon attaining a high IQ, cognitive intelligence. I realise that EI is a very important skill. Most of my problems come because my staff does not know the two skills (emotional abilities and competencies) you talk about. They need abilities in dealing with real issues. They are all very good in cognitive intelligence. But when dealing with people in customer services they don't know how to handle that."

Emotional intelligence at an organisational level emerged in thematic analysis of executive interviews as being in its infancy, with several executives moving or going to move to establish it in their training. Emotional intelligence tended to be regarded by executives as competencies or traits desired of senior level executives but senior executives interviewed for this study generally did not speak of emotional intelligence being a driver of economic value in their organisations.

### **5.3.1 Summary of Research Q.2**

*In conclusion, emotional intelligence was seen by the respondents to this study not to have influenced significantly organisation effectiveness. However, managers in this sample indicated that emotional intelligence needed higher priority in their corporations in Singapore if it was to influence organisational effectiveness. Whilst senior executives generally recognised the growing importance of emotional intelligence, they had not established it in corporate culture or valued it as adding economic value to their activities.*

These findings from the questionnaire and executive interviews that employees held strong views affirming that emotional intelligence has increased the competence of people in organisations and that corporations have not placed any priority on implementing emotional intelligence training in the workplace, are in marked contrast to findings elsewhere. We now know that emotional

intelligence improved individual and organisation performance and has gained wide acceptance across the workplace internationally. Whilst many organisations are still coming to terms with what emotional intelligence means and what it encompasses, other organisations have invested heavily in its ongoing implementation and development (Allworth Juniper 2003; Brown, 2005; Cossar 2002; CREIO 2005; Druskat & Wolfe 2001; Fox 2004; Hay Group 2005; Hepworth 2004; Nader 2003; Power 2004; Sala 2001).

#### **5.4 Research Q.3 – How important is emotional intelligence in the workplace for star performance, selection, leadership, team building, appraisal, and training?**

Research Question 3 examined the perceptions managers and senior executives in Singapore have of the importance of emotional intelligence in the workplace for (1) star performance, (2) selection, (3) leadership and team building, (4) appraisal, and (5) training.

Results of this research (chapter 4.4.5) showed that managers saw emotional intelligence playing an important role in increasing the competency of people in organisations in Singapore. They agreed that companies should be willing to assist employees to increase their knowledge of emotional intelligence. Managers saw emotional abilities and competencies being demonstrated by star performers and valued these skills in themselves. What was surprising in the results was that while managers saw emotional intelligence as important for star performers, they generally agreed that emotional intelligence was essential for team building and leadership but disagreed that knowledge of emotional intelligence led to promotion. They felt that staff should not be allowed time off from work to study about emotional intelligence and showed little interest themselves in learning about emotional intelligence. About 70% of managers (59) were not sure if emotional intelligence was a passing 'fad' or indeed saw emotional intelligence as a passing 'fad'.

This study now reviews each part of research question 3.

#### **5.4.1 The importance of EI in the workplace for star performance**

In an article titled, "The War for Talent", Chambers et al. (1998) argued for the elevation of talent management to "a burning corporate priority" through creating an employee value proposition that challenged star performers, or high potentials, to come to work for you.

As stated in chapter 2.4.3a, Goleman (2000b) defined star performance as 'the natural consequence of developing and using certain emotion competencies and skills' (p. 17). The HayGroup (2005), with which Goleman is associated, promoted emotional intelligence for star performance arguing that emotional intelligence was twice as important as IQ plus technical skills. Emotional intelligence is more than 85 percent of what sets star performers from the average.

Emmerling & Goleman (2003) concluded,

when it comes to the question of whether a person will become a 'star performer' (in the top ten percent, however such performance is appropriately assessed) within that role, or be an outstanding leader, IQ may be a less powerful predictor than emotional intelligence (Emmerling & Goleman 2003).

Quantitative analysis of research questionnaire data (chapter 4.4) found that, in the view of managers, star performers in their work place exhibited emotional intelligence and respondents generally held a strong view of the importance of emotional intelligence for star performance in their companies.

Senior executives had a mixed view on the importance of emotional intelligence for star performance. Whilst many recognised emotional intelligence in star performers they thought about it more as behaviour competencies. For example, emotional intelligence competencies including impulse control, interpersonal relationship, and an ability to solve problems were seen as the key to successful star performance. Others measured star performance simply by criteria such as meeting job goals?

*It may be concluded that managers and senior executives view emotional intelligence as competencies, as against mental abilities, and agree that these competencies are important for star performance, particularly when one is being considered for leadership positions.*

#### **5.4.2 The importance of EI in the workplace for selection**

The literature (Cherniss 2004; Chu & Kwan, 1999) provided examples of how emotional intelligence and emotional competencies assisted in the hiring and selection process. Research from this study (chapter 4.4.4) showed that companies and other organizations in Singapore had not accorded sufficient importance to emotional intelligence in their search for and selection of talent.

In executive interviews, seven CEOs and Human Resource Managers were asked if managers were tested for emotional intelligence in corporate staff selection, appraisal, promotion, and retention assessments.

As reported in chapter 4.6.2, testing for, or measuring, emotional intelligence was not conducted by any organisation in this sample of senior executives. Testing was largely for senior executives and centred on personality, 360 degree reports, and measurements of performance versus job goals.

*It may be concluded that organisations in Singapore do not use emotional intelligence tests in the workplace for selection of managers, either in recruitment or in appraisals for promotion. Senior executives saw emotional intelligence as being more relevant in the middle of the employment life cycle, something that was assessed by "gut feel", intuition, or experience – something akin to one "feeling comfortable" with a person – and generally encompassed in existing psychometric testing.*

### **5.4.3 The importance of EI in the workplace for leadership**

The research literature, chapter 2.4.3c, pointed to research that places emotional intelligence as one of a broad spectrum of skills, which managers or leaders have in varying levels. Goleman (1998b) firmly believed that 'emotional intelligence is the *sine qua non* of leadership' (p. 82). Goleman (1998b), championed emotional intelligence as a broadly based set of competencies that were differentiated from technical skills (like accounting and business planning) and cognitive abilities (like analytical reasoning). Goleman argued that emotional intelligence (EI competencies) emotional skills were more important than technical and IQ skills. 'In short the numbers are beginning to tell us a persuasive story about the link between a company's success and the emotional intelligence of its leaders' (Goleman 1998b, p. 84).

### **5.4.4 The importance of EI in the workplace for team building**

Managers in Singapore placed reasonable importance on emotional intelligence for team building, but did not see emotional intelligence as essential for team building. Senior executives provided some insight into how they saw emotional intelligence being important for team building.

*Thus, it may be concluded that managers and senior executives recognised emotional intelligence as being important for team building.*

Quantitative analysis of research questionnaire data (chapter 4.4) found that, managers in Singapore placed reasonable importance on emotional intelligence for leadership, but did not see emotional intelligence as essential for leadership and team building.

*Thus, it may be concluded that managers and senior executives did not recognise emotional intelligence as being essential for leadership, although they viewed it as being important. They did not see testing of emotional intelligence as important for identifying future leaders. Leadership seemed to*

*some to be viewed more in the traditional way as setting a credible example, not being ego centric, being a team player, and moving forward, rising from one's point of view to one's viewing point.*

#### **5.4.5 The importance of EI in the workplace for appraisal**

Managers did not see emotional intelligence as being important for appraisal and promotion. Senior executives were asked about their view on the importance of emotional intelligence for appraisal and retention of managers.

*It may be concluded that managers and senior executives had mixed opinions on emotional intelligence being important for appraisal. Some managers saw money being good for getting, retaining, and rewarding people without testing of emotional intelligence. Others felt testing of emotional intelligence competencies, as part of existing psychometric measures, was important for appraisal and promotion. No organisations tested directly for emotional intelligence in appraisals.*

#### **5.4.6 The importance of EI in the workplace for training**

Managers believed that their companies should give higher priority to emotional intelligence and provide more resources to meet the cost of training in emotional intelligence, yet, surprisingly,

- d. did not see the importance of allowing staff time off to study emotional intelligence, and
- e. were generally not passionate about learning about emotional intelligence.

Additionally, it was concluded, based on content analysis of executive interviews, section 4.5, that there were no patterns or trends of words or phrases on emotional abilities or competencies to indicate that emotional intelligence was

established in corporate culture, added to economic value, or was being applied and implemented to any significant extent in Singapore companies corporate staff selection, appraisal, promotion, retention, and staff training policies.

In executive interviews, seven CEOs and Human Resource Managers were asked if the development of emotional intelligence of managers was a corporate priority in staff training. Themes that emerged from these interviews suggested that emotional intelligence was not a corporate priority for most senior executives interviewed for this study and that emotional intelligence was believed to be difficult to train. Few organisations acknowledged that they had committed substantial resources in the training and development of emotional intelligence.

*It may be concluded that corporations in Singapore did not train managers directly in emotional intelligence, but incorporated aspects of emotional intelligence competencies in general training.*

#### **5.4.7 Summary of Research Q.3**

It can be inferred from this analysis that, in the opinion of managers and senior executives of organisations in Singapore, emotional intelligence was recognised as being important for star performance and individual success. However, managers and senior executives were not engaged fully in embracing, prioritising, or applying emotional intelligence for star performance, selection, leadership and team building, appraisal, and training opportunities. This analysis has shown that managers and senior executives in Singapore were reluctant to commit fully to developing and applying emotional intelligence in the workplace. They generally did not agree that prioritising emotional intelligence in their employee value propositions would assist managers create value for the organisation.

In contrast to these findings, research has shown that companies internationally have promoted emotional intelligence for star performance (Hay Group 2005; Schutte et al. 2002) and that emotional intelligence contributes to job

performance (Mayer et al. 2004a). Whilst emotional intelligence measurement needs to be used with caution in selection (Mayer et al. 2002b), it has been found to assist in the selection process (Chernis 2004). Emotional intelligence in managing and leading has been found to be twice as important as technical and IQ skills (Goleman, 1998b), assisted in mood management and behavioural change (Goleman et al. 2001), informed a leader's ability to persuade and communicate (Dearlove 2003), promoted a transformation leadership style (Ashforth & Humphrey 1995), differentiate successful leaders (Cavallo & Brienza 2004), and very important for success (Hay Group 1999a).

## **5.5 Summary of the discussion**

Emotional intelligence is

the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth (Mayer & Salovey 1997, p. 5).

Palmer & Stough (2005), quoting Mayer & Salovey (1997), said, 'Emotional intelligence refers to abilities to do with emotions including (but not limited to), the ability to perceive, understand, utilise and manage one's own and others' emotions'.

The findings of the current study suggest that managers in this sample in Singapore show an average level of emotional intelligence mental abilities as measured by the MSCEIT scales and subscales. Additionally, there is no substantive difference in the emotional intelligence abilities of Western and Chinese Singaporean managers.

*EASEQuadrant* profiling suggests that in this sample of managers a typical Singapore manager who showed emotional intelligence was likely to be around the age of 40, a male, had either high school or university education, occupying middle or junior manager positions, and was perhaps a Chinese Singaporean.

A review of demographic factors such as sex, age, education, and management level, showed that while emotional intelligence is independent of age, male managers in Singapore tended to be more emotionally intelligent than female managers. A typical Singapore manager who showed emotional wisdom (i.e, is able to apply both emotional knowledge and emotional intelligence) was likely to be around the age of 40, a male, had either high school or university education, occupied middle or junior manager positions, and was perhaps a Chinese Singaporean.

When compared with respondents involved in the norming of the MSCEIT North American sample, Singapore managers were generally lower in emotional intelligence in terms of their MSCEIT total and experiential and strategic area scores, though not to any significant degree.

Quantitative analysis of this study's research questionnaire and executive interviews showed that:

1. Managers felt emotional intelligence had little influence and needed higher priority in their corporations in Singapore,
2. Managers and senior executives in Singapore were reluctant to develop and apply emotional intelligence in the workplace and did not see emotional intelligence as important for increasing economic value,

A qualitative review of hand written replies to questions 1, 6 and 9 of the research questionnaire and transcripts of executive interviews concluded that:

1. Managers in Singapore do not have a grounded view of emotional intelligence, and
3. Senior executives of corporations in Singapore were aware of the construct of emotional intelligence, indeed some were passionate about implementing the concept in their organisations to varying degree, but were reluctant to give it priority in employee value

propositions or training to increase productivity and create economic value.

Ghoshal argued that the manager's job is to create value (Mann 2000, p. 23). This thesis argued that emotional leadership, of which emotional intelligence forms a part, is the driver of improved managerial performance and thereby increased economic value. Research is showing increasingly that the measuring and the implementation of emotional intelligence in the workplace is a predictor of success. There is considerable evidence provided in this thesis for the argument that emotional intelligence is a precursor to increasing individual success and organisation effectiveness. In the context of creating value and attracting foreign talent to Singapore, the results of this study have shown that there is considerable room for improvement in the emotional intelligence of both Singaporean and international managers in this sample in Singapore.

In the ongoing debate on attracting and retaining foreign talent in Singapore, one senior executive interviewed for this study suggested that perhaps international managers add a more flexible management style. Part of this, he professed, is understanding individual circumstances (including emotions) and how that should impact on the way people are managed or treated at work. The final chapter of this thesis argues that the results of this analysis point to the need for executives to implement the measurement and development of the emotional intelligence of their managers, which impacts directly on management style, as a corporate priority in their organisations.

## **5.6 Implications arising from this study**

There are at least three implications arising from the results of this study.

The first implication is that the performance-based measurement and interpretation of emotional intelligence scores of managers in this sample revealed

that there is considerable room for improvement in the emotional intelligence of managers in Singapore. To raise the level of emotional intelligence of managers, the study argued that physiological factors inform an individual manager's emotional intelligence through neurological transmitters and appealed for the necessity of individual managers acquiring emotional skills and expertise as one necessary component of a broad spectrum of skills and interventions that enable them to create value for the organisation and themselves. To this end the study developed a new tool, *EASEQuadrant*, as one component of a framework of emotional leadership practice, for the examination, acquisition, development, and applied use of emotional knowledge and skills. It is proposed that the *EASEQuadrant* programme fosters emotional well-being and trusting relationships that enable individual managers to create wealth for their organisation and themselves. A proposal to test the efficacy of the *EASEQuadrant* programme is included in this thesis (chapter 6.4.2).

An argument for the implementation of emotional intelligence development of managers is presented in section 5.6.1 and a case study of how a Global Category Manager – Catalysts, chemical engineer, and MBA, of one of the world's largest diversified resources group improved her emotional intelligence over an 18 month period, using *EASEQuadrant* emotional leadership development, is discussed in section 5.6.2.

The second implication of this research points to the need to establish a Singapore norm for the comparison of individual MSCEIT scores. This implication is discussed in Directions for future research, chapter 6.4.1: Establishing Singapore normative data for the MSCEIT.

A third implication of this research is that the research questionnaire and executive interview analysis provided evidence to support the notion that emotional intelligence is valued by managers in this sample but not given sufficient priority in its implementation in organisations in Singapore. Additionally, future research needs to develop clearer definitions of emotional intelligence and psychometric instruments that target specifically the separate

component parts of the applied construct. This implication is discussed in Directions for future research, chapter 6.4.2: Research into the utility of emotional intelligence testing.

### **5.6.1 Implementation of the measurement, training, and development of emotional intelligence**

This study argues for the implementation of the measurement, training, and development of emotional intelligence for managers in organisations in Singapore, using a combined approach utilising the three major models of emotional intelligence and their respective measuring tools. There are practical implications of this study for organisations including a more socially cohesive, motivated, emotionally healthy workforce, the retention of talent in Singapore in the global economy, and increased revenue.

However, for these implications to be realised, Boards of Directors and chief executives will need to be presented with measurements indicating there will be no improvement in revenue without priority being given to the implementation of emotional intelligence in their employee value proposition and training programs. Only then will emotional intelligence gain this influence and importance. After all, traditional Boards and chief executives will most often not be moved to implement change to existing culture without an analysis that shows the impact of prioritising emotional intelligence on the bottom line. This despite the overwhelming scientific literature presented in this thesis supporting emotional intelligence as a predictor of success. Future research may show how this could be achieved.

Practical implications of this study in the individual context are equally profound. Charles Darwin (1872/1998) commented:

I have no great quickness of apprehension or wit ... my power to follow a long and purely abstract train of thought is very limited ...

[but] I am superior to the common run of men in noticing things which easily escape attention, and in observing them carefully (p. v).

The above quotation points to a major practical implication of this study for individual managers who choose to increase their emotional intelligence skill level. An emotionally intelligent manager will *notice* emotions signalling something to him about a relationship, *observe* the situation surrounding the emotion carefully, *recognise* the cognitive appraisal that triggered the emotion, and *respond* with emotionally intelligent behaviour. The manager skilled at recognising low to high levels of intensity of emotion felt in the body and the trigger that informs the emotion will be securely placed to manage effectively their response. This is the emotionally intelligent response that empowers behavioural change in the manager; for themselves, their team, and their relationships. This emotionally intelligent response is ownership by the manager of his or her emotional intelligence abilities and competencies, exercising emotional leadership. Emotional leadership skills are one of a broad spectrum of skills which managers have in varying levels that are differentiated from technical skills (like accounting, business planning, and engineering) and cognitive abilities (like analytical reasoning).

There is also anecdotal evidence from the author's behavioural coaching practice that managers join leading multinational companies but leave poor managers, not having had the opportunity to develop his or her emotional intelligence because the organisation had not implemented such a program. Fleming, Coffman & Harter (2005, p. 8) argued that a manager's local environment may cause him or her to leave a company. They recommended interventions that improve a local business environment should include: 'targeted training, performance reviews, action learning, and individual coaching' (p. 8). In addressing the inner transformation and deep desire for change required of leaders today Chopra (2004) argued that a truly effective leader must have 'an understanding of (his or her) hierarchy of needs and responses (p. 24) and be a person with 'character who had inner values' (p. 25). Chopra (2004) explained, 'It is in understanding emotions and emotional bonds, a process that is now

understood biologically, that lays the sources for transformation, the sources for a new paradigm in leadership... ' (p. 22).

The practical implication of a manager recognising and acknowledging improved emotional intelligence skill, that is, exercising emotional leadership, is improved individual performance with inherent benefits, including improved status in the organisation and financial reward. As Goleman attests, 'Emotional leadership is the spark that ignites a company's performance, creating a bonfire of success or a landscape of ashes. Moods matter that much' (Goleman et al. 2001, p. 51). Managers who want to be emotionally intelligent leaders have a responsibility to exercise emotional leadership in their interactions with others, assisting them to gain emotional knowledge and nurture emotionally intelligent behaviour (Gosling & Gosling 2004). This transfer of emotional knowledge and emotional intelligence has significant implications for building effective teams. In a study of 27 subjects over 12 months, Palmer (2003a) reported participants shared their results from the Genos emotional intelligence test with their team and used it as an opportunity to promote open communication within the team.

The author's client case study (section 5.6.2) is included in this thesis that suggests that improved emotional intelligence mental ability scores and team relations were the result of *EASEQuadrant* emotional leadership development for one senior executive in a diversified resource company. Empirical longitudinal research is required to demonstrate the efficacy of this program. Future research into the *EASEQuadrant* eight factor structure may confirm that the emotionally intelligent response applied in the business environment will predict superior individual performance and organisation effectiveness. The future success of organisations in Singapore and in the global economy may depend on the responsiveness of Boards and senior executives to the necessity of implementing emotional intelligence development in their employee value proposition and in training programs in their organisations. This study has provided such a program, *EASEQuadrant*, for training employees to nurture and develop their emotional intelligence; *how* emotional intelligence can be applied in everyday living and organisation settings for organisation effectiveness and individual success.

### 5.6.2 Case history – brief analysis

The permission of the client was sought and obtained for this analysis.

A Global Category Manager – Catalysts, chemical engineer, and MBA, of one of the world's largest diversified resources group, with net assets of US\$85 billion and net income of US\$18 billion, completed the *EASEQuadrant* programme after attending a company sponsored Group Business Leadership Program. During that program it was suggested that improving her emotional intelligence would significantly increase her effectiveness as a Leader. In subsequent performance reviews with her manager it was stated that although there were no questions concerning her ability or achievement that the relationship part of the equation was a major problem and would limit further advancement if not addressed. The manager attended as a client of Goslings International Pte Ltd in Singapore from December 2003 to June 2005. She completed the MSCEIT and EQ-i emotional intelligence tests in December 2003. Thereafter she attended regular coaching consultations over the next 18 months where her emotional intelligence scores were classified and explained to her and she received coaching in emotional leadership, applying the *EASEQuadrant* framework.

Following is an example of the issues the manager was dealing with as a senior executive. Recently, reflecting on a recent telephone conversation with a subordinate in another country, the manager had not been happy with her irritability and manner toward her subordinate and her behaviour had bothered her subsequently. Naturally, this impacted on her mood. The manager said that on reflection, if she could have the conversation again she would think about her subordinate as a person and be more sensitive to what she must be going through. As her superior, the manager had an awareness of her subordinate's stressors, including the recent accidental death of a grandson and also of her mother whom she had nursed for two years. The manager recognised that because she had been irritable on the phone toward her subordinate, her subordinate may now feel unsupported by her and fearful of criticism in a forthcoming team meeting. The manager decided to ring the subordinate prior to the meeting to apologise for her

irritable manner, to acknowledge the good work that her subordinate had done, and to reassure her subordinate of her support in the meeting. The manager acknowledged that she would not have done this 18 months earlier. Instead, she would have been aware of her irritability, but felt she had a right to be irritable as the subordinate had indeed made mistakes. The manager commented that she is still learning to think about her team member's feelings when giving directions or feedback about objectives, i.e., developing empathy, as this does not come naturally to her.

The author invited the manager to provide her perspective on the practical implication to her and her organisation of completing the *EASEQuadrant* program, as anecdotal evidence of individual success from developing applied emotional intelligence. She replied as follows:

Thank you. You have made me a lot of cash this year. My boss is so impressed with my improvement in the areas that brought me to you in the first place, namely, anger, irritability, and lack of empathy, I was given a high performance rating and that translates immediately into cash. The difference now for me from a year ago is that then I wouldn't have looked to myself for why I am cranky. I wouldn't have looked to my body. There are a lot of outside reasons why my body feels bad, e.g., jet lag, working weird hours and hormones, but that does not mean that I have to act badly.

The manager first completed the MSCEIT online in December 2003. She was invited to complete the test again in June 2005 and a comparison made of the results. The authors of the MSCEIT (Mayer et al. 2002b, p.10) argued that the MSCEIT can be administered periodically so that the administrator can track the respondent's possible changes in skill level, which occur gradually.

Basically, the MSCEIT and other measures in this field are likely to be best at predicting the way in which individuals behave over situations or over time, as opposed to any single instance (Mayer et al. 2002b, p. 46).

## Chapter 5 – Discussion

As some 18 months had elapsed since the manager first completed the MSCEIT it was felt that administration of the test a second time would detect changes in emotional skill levels. Administration of the test was as described in chapter 3.2.1 for all respondents. The manager was given the user name and password via email and asked to logon to the research site of the test publisher and complete the test in her own time. She received no assistance in completing the test. The results for the manager's two MSCEIT tests are presented below:

<b>MSCEIT – Manager Scores</b>	<b>December, 2003</b>	<b>June, 2005</b>
TOTAL MSCEIT	: 92	102
Experiential Area Score	: 98	98
Perceiving Emotions Branch	: 92	91
Faces Task	: 108	99
Pictures Task	: 83	85
Facilitating Thought Branch	: 105	111
Facilitation Task	: 125	131
Sensations Task	: 89	93
Strategic Area Score	: 87	103
Understanding Emotion Branch	: 88	103
Changes Task	: 86	97
Blends Task	: 89	100
Managing Emotion Branch	: 91	102
Emotion Management Task	: 89	103
Emotional Relations Task	: 95	101

The initial assessment of the manager's emotional intelligence mental abilities, measured by the MSCEIT, indicated low average emotional skills as compared to the North American population sample. Her strengths, with high average scores, were in using emotion to facilitate thought (facilitation part of Branch 2 of the MSCEIT) and perceiving emotion in faces (part of Branch 1 of the MSCEIT). She scored particularly low and needed to consider improvement in her ability to use empathy (sensation part of Branch 2 of the MSCEIT), understand emotion chains and blends (Branch 3 of the MSCEIT), and emotional self-management (part of Branch 4 of the MSCEIT). Her mental ability in relational management (part of Branch 4 of the MSCEIT) was higher at a low average score.

The manager agreed with the explanation of the initial MSCEIT assessment of her emotional skills as displayed on the *EASEQuadrant* grid (figure 5.1). She acknowledged that whilst she was adept at recognising emotion in people's faces and could generate emotion to assist her in problem solving, she was less successful in empathising with team members, managing her own internal negativity, and conducting team related interactions. She had felt a right to be irritable and angry when subordinates made mistakes. By providing the manager an explanation of her MSCEIT results, along with a review of her self-perceived emotional traits measured by the EQ-i, she understood better the impact of her untoward behaviour towards colleagues and her own negativity. She learned how to deal with issues in a way that had a positive rather than negative impact on her own emotions and those of her colleagues. The emotional intelligence tests provided the manager a base line from where she could improve her emotional knowledge and emotional intelligence through the *EASEQuadrant* eight-stage program.

Results of the manager's MSCEIT assessment in June 2005 showed her total emotional intelligence mental ability score was now in the high average range as compared to the North American population sample. When her MSCEIT EIQ experiential and strategic area scores were plotted on the *EASEQuadrant* grid (figure 5.1) they showed significantly increased strategic

emotional skills due to her improved ability to understand emotional chains and blends and enhanced emotional self management and relational management skills. The manager's ability to use emotion to assist thought also increased markedly; her ability to generate emotion to improve mood (facilitation task) and her ability to generate empathy (sensations task) indicated greatly improved emotional skill in experiential emotional intelligence. The manager's ability to perceive emotion in faces and pictures remained in the low average score range.

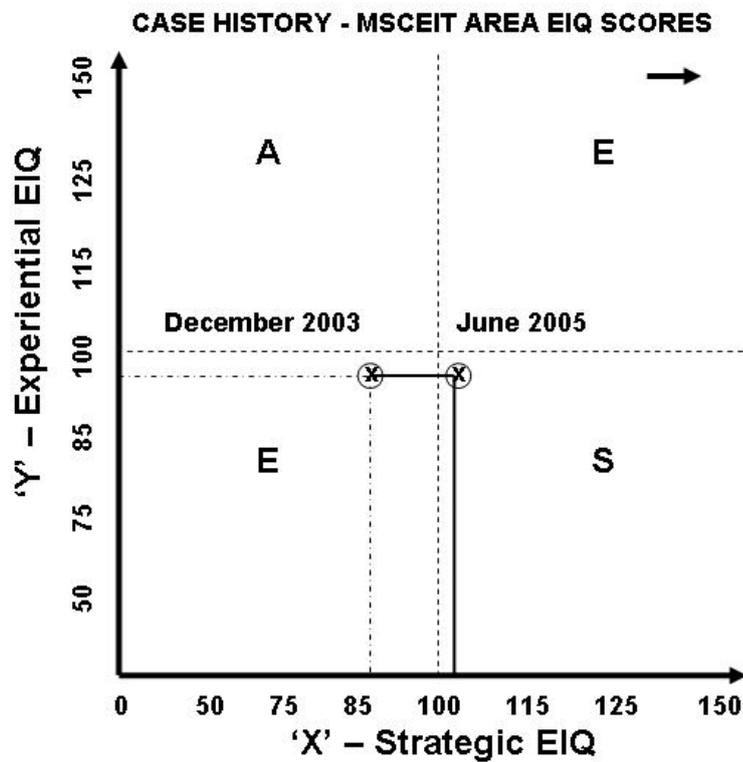


Figure 5.1 – Case History MSCEIT Area EIQ Scores

Notwithstanding the limitations of this research detailed elsewhere in this thesis, including the cautionary remarks by the authors of the MSCEIT on the applied use of task scores (Mayer et al. 2002b, p. 35, 77), this final brief analysis was of a senior manager in a large multi-national corporation in Singapore who presented with emotional leadership issues. After testing for

emotional intelligence and training in emotional leadership she made remarkable improvements in behavioural change in the space of 18 months, undergirded by strengthening her emotional intelligence. The example provides a glimpse of the practical implications and benefits of improving ones emotional intelligence and gauging the impact and effectiveness of organisational training and change by completing the MSCEIT test at the commencement and on the completion of training.

Additionally, the manager's improved emotional intelligence was recognised by her boss in the workplace in her being awarded a high performance rating that translated immediately into cash. Her significant behavioural change, brought about through improved emotional intelligence, had a direct impact on herself, her team, and her relationships. The manager's performance review produced increased personal financial reward. We can only presume that the manager's improved behavioural change, brought about through improved emotional intelligence and recognition of her more responsive and caring relationships with staff, led to increased organisation effectiveness and productivity. Future research, such as is proposed in chapter 6.4.2, could examine if this were true.

## Chapter 5 – Discussion

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## CHAPTER 6

### CONCLUSIONS, STRENGTHS, LIMITATIONS, AND DIRECTIONS FOR FUTURE RESEARCH

This chapter draws together conclusions about the measurement of emotional intelligence of managers in this sample in Singapore and the perceptions of managers and senior executives had about the influence and importance of emotional intelligence in Singapore corporations. Strengths and limitations of the research are discussed, recommendations for future research are made, and practical implications for the implementation of the measurement, training, and development of emotional intelligence for managers in organisations in Singapore are considered.

#### **6.1 Overview**

This dissertation has provided analysis of emotional intelligence scores of managers in Singapore measured by the MSCEIT mental ability model of emotional intelligence. In addition, it explored the influence of emotional intelligence in organisation effectiveness and individual performance through the perceptions of managers and senior executives of corporations in Singapore who completed research questionnaires and executive interviews for the study.

To the author's knowledge, no research of this nature has been undertaken previously in Singapore. This thesis contributes new knowledge to the academic literature on the level and status of emotional intelligence of managers in this sample in organisations in Singapore and a new tool for classifying and explaining emotional intelligence scores measured by the MSCEIT.

It was concluded from the literature reviewed in chapter two that emotional intelligence involved the ability to understand emotions in oneself and others, relate to peers and family members, and adapt emotionally to changing environmental concerns and demands. In summary, emotional intelligence was argued to be:

- (1) Traits (e.g., how good are you at being empathetic) measured using the EQ-i (Bar-On, 1997b) to provide a subjective or self-perceived assessment by employees for employers on

a multifactorial array of interrelated emotional, personal, and social attributes that influence our overall ability to actively and effectively cope with daily demands and pressures (Bar-On, 2000, p. 385); or

- (2) Competencies (e.g., how well an individual met a specific standard, i.e., how competent that person was in using their emotions) measured using the ECI to provide informants' assessments of employees for employers on a person's

behavioural manifestations of underlying neurological circuitry that primarily links the limbic areas for emotion, centring on the amygdala and its extended networks throughout the brain, to areas in the prefrontal cortex, the brain's executive centre (Goleman, 2001b, p. 3); and/or

- (3) Mental abilities (skills) (e.g., do you or don't you have the ability to be empathetic) objectively measured using the MSCEIT, to inform employers if employees can perform tasks and solve emotional problems, i.e., what mental abilities employees have to perceive, use, understand, and manage emotion in themselves and in others. The mental ability model was the preferred theory of Mayer, Salovey & Caruso (2000a, p. 404) because it was theoretically defined as more distinct from traditional intelligences, such as, verbal, performance, and social intelligence, and was the model used in this study to measure the emotional intelligence of managers in Singapore.

The study presented an historical account of the emergence of emotional intelligence, from the study of emotions, personality, and neuropsychology, into a field of study in its own right. The study reviewed emotion as an evolved signalling system in the body, the link between cognition and emotion as parts of personality forming emotional intelligence, and the areas of the brain implicated in integrating emotion and cognition. It was argued that an understanding and development of emotional intelligence as a biological-psychological construct was

integral to an individual manager's emotional health and increased well-being, ability to manage stressors, and performance in the workplace. Ghoshal had argued, 'Management's job is value creation' (Mann, 2000, p. 23). It is argued here that emotional intelligence underpinned interpersonal manager/leadership performance and thereby organisation effectiveness, in the process of value creation in the firm. This study provides a case history with anecdotal evidence that this is true (chapter 5.6.2).

Various approaches and instruments measuring emotional intelligence were examined. The MSCEIT (Mayer, Salovey & Caruso, 2002b) was chosen as the preferred psychometric instrument for measuring the emotional intelligence of managers in Singapore. Mayer, et al. (2002b), authors of the MSCEIT, argued that their mental ability model of emotional intelligence met the criteria for a standard intelligence, was reliable, and that it predicted important outcomes. Mayer and colleagues (2002b) acknowledging the need for further research to establish higher reliabilities at the task level of the MSCEIT.

It was therefore appropriate as the first aim of this study to measure the emotional intelligence mental abilities of managers in Singapore using the MSCEIT. A second aim of this study was to explore the influence of emotional intelligence for organisation effectiveness and the importance of emotional intelligence for individual success. Finally, this study sought to point to directions for future research in emotional intelligence in Singapore.

Data collection involved, firstly, measuring the emotional intelligence (EI) mental abilities of local and Western managers (N=86) in corporations in Singapore, using a performance-based psychometric instrument – The MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test (Mayer & Salovey, 1997; Mayer, et al. 2002b; Salovey & Mayer, 1990). Secondly, the study collected data from research questionnaires completed by 139 respondents. Thirdly, transcripts from seven executive interviews were analysed.

The triangulation of data from MSCEIT scores, research questionnaires, and executive interviews provided sufficient data to draw conclusions about the

level of emotional intelligence of managers in Singapore and the influence and importance managers and senior executives of corporations in Singapore gave to emotional intelligence in their employee value proposition; the selection, training, and retaining of managers as star performers to maximise the economic value of the firm. Results from quantitative analysis, including descriptive statistics and content and thematic analysis, and a qualitative interpretation of the data provided conclusions for this thesis.

## 6.2 Conclusions

This study set out to measure the emotional intelligence of local Singaporean and international managers in Singapore. It argued that acquiring emotional skills and expertise, as one of a broad spectrum of skills will enable individual managers to create value for their organisation and themselves. The study was carried out in an international context advancing knowledge of the level of emotional intelligence of managers in Singapore. It reported on the degree to which senior executives in Singapore are engaged in the implementation of emotional intelligence in their organisations in Singapore. Specifically, this thesis provided an original contribution to the applied use of emotional skills in the workplace. It proposed *EASEQuadrant* as a theoretical framework for classifying and interpreting emotional intelligence scores measured by the MSCEIT. *EASEQuadrant* is additionally an eight stage emotional leadership program to equip managers with emotional skills and knowledge to behave with emotional intelligence in the workplace and create value for their organisation and themselves. It forms a central component of a new theory of Emotional Leadership Practice (chapter 3.7).

Two conclusions may be derived from the analysis of the data sets in this thesis:

First, the study found, from results scored by the MSCEIT, that managers in Singapore had average emotional intelligence, as compared to the North

American norm. There was no substantive difference in the emotional intelligence abilities of Chinese Singaporean managers and their Western counterparts. Results showed that the emotional intelligence of local and Western managers in Singapore was comparable to the emotional intelligence of the research study group norm of 5000 respondents, mainly from North America. The study recognised that the measurement of emotional intelligence scores in future research should be compared to a national Singapore norm. The study revealed that there is considerable room for improvement in the emotional skills of managers in Singapore. The study proposed that emotional intelligence predicted important outcomes for individual and organisation performance.

The thesis argued that managers who exercised emotional leadership,

1. understood their level of emotional intelligence
2. took responsibility to learn new emotional knowledge and skills, and
3. behaved with emotional intelligence.

Such a manager had a responsibility to pass on this expertise to others and so develop the emotional intelligence of the organisation for the benefit of themselves and others. A manager and leader who acted with emotional leadership, i.e., behaved with emotional intelligence, would exercise excellent intrapersonal and interpersonal skills, the precursor to building a feeling of long-term trust in personal, business, and social relationships. Such a manager would be a star performer, be an effective transformational leader, and create economic value in the organisation.

Second, the study found that respondents felt emotional intelligence influenced star performers but did not influence significantly organisation effectiveness. Additionally, whilst senior executives recognised the influence and importance of emotional intelligence for organisation effectiveness and individual success, they did not set emotional intelligence as a priority for employee value propositions and training. An implication of this study is that organisations that do not tie the measurement and development of emotional intelligence to

## Chapter 6 – Conclusions

organisation effectiveness and performance will find it more difficult to retain talent and compete in the global marketplace.

Taken together, the results of this study offer insight into the emotional intelligence of managers in this sample in Singapore through a new model interpreting emotional intelligence mental abilities and suggest the need for greater priority in the development of emotional intelligence of managers in organisations. Managers should advance their emotional leadership – heighten their awareness of the source of their emotions, understand their emotional style, and raise their emotional intelligence – and work to raise the awareness of others' emotional leadership practice. Practising emotional leadership plays an important role in building trust in relationships precisely because managers are unaware of the significant influence their emotional state, including emotional intelligence, has on individual success and organisation effectiveness.

Fineman (2004) argued,

Reflexivity is a feature of emotional knowing, as crucial to the qualitative researcher as a table of population norms is to the psychometrician. Emotions can be regarded as both public and private commodities. It is certainly possible to research emotions without measuring it (Fineman 2004, pp. 733-736).

To agree with Fineman would be to disregard the measurement of emotional abilities altogether. But this study has shown that measuring the emotional intelligence of individual managers provided valuable insight into the level of emotional intelligence of managers in Singapore. Classifying and interpreting emotional intelligence scores using *EASEQuadrant* provided a rich source of additional information to assist individual managers to nurture and develop their emotional intelligence. In addition, this study reflected on perceptions of managers and senior executives about the influence and importance of emotion and emotional intelligence for their lives and organisations. Both the measurement and reflection on emotions and emotional information has highlighted the urgent need for organisations in Singapore to become more effective by embracing a commitment to developing the emotional intelligence of their managers. Organisations benefit through selecting and developing high

emotionally intelligent managers, who can better perceive emotions, use them in thought, understand their meanings, and manage emotions better than others (Mayer, et al. 2004a, p. 210). This thesis argued that emotional intelligence empowers organisation effectiveness, individual success, and emotional well-being, adding economic value in the workplace.

Ultimately, each manager and each senior executive needs to ask of emotional intelligence, 'How much does this matter?' and 'How high a priority is it?' (Mayer, et al. 2004a, p. 211). For those who have attained success despite emotional intelligence, the author would ask that they reflect on, "How long can I sustain my success without emotional intelligence?" Marketing, management, strategy, and innovation may drive business success (Abraham, 2001), but this thesis has argued that it is the belief set of emotionally intelligent manager (strategy of awareness, tactics, and value) that drives him or her to measurable, positive behavioural change to sustain business success.

This thesis contributed significant new research to the knowledge base of emotional intelligence, specifically through:

1. Data analysis of emotional intelligence scores of local and Western managers in Singapore measured by the MSCEIT (Appendix B.1) to add to the growing volume of normative data on the mental ability facet. Specifically, this dissertation examined differences in MSCEIT scores according to citizenship status (local Singapore citizen versus foreigner/Western), and demographic factors such as sex, age, education, and management level.
2. Analysis of the perceptions of individual local and foreign managers in Singapore on how they see emotional intelligence influencing star performance and the search for and retention of talent in the workplace and how they view their employer company's commitment to implementing training in emotional intelligence.

3. Analysis of executive interviews with seven senior executives of corporations in Singapore on how executives viewed the importance of emotional intelligence in selection, appraisal, promotion, and retention policies and the degree to which their companies are committed to applying emotional intelligence in the workplace to add economic value to their businesses.
4. A comparison of the Singapore sample of MSCEIT emotional intelligence scores of local and Western managers with the total, area, branch, and task score means of the MSCEIT Version 2.0 North American general consensus scores (n = 2,112, Mayer et al. 2003).
5. An argument for the establishment of a Singapore national norm for emotional intelligence scores measured using the MSCEIT.

Finally, and most importantly, this study has contributed to the applied nature of the mental ability construct of emotional intelligence by the development of a new tool, *EASEQuadrant*, for the classification and explanation of emotional intelligence scores scored by the MSCEIT and the training of managers in emotional intelligence.

### **6.3 Strengths and limitations**

#### **6.3.1 Strengths**

First, Mayer, et al. (2004a) reported 'the MSCEIT's overall reliability (for general consensus scores) was  $r = .93$ , with area reliabilities of  $r = .86$  to  $.90$ , and branch scores representing the four branch model of  $r = .76$  to  $.91$ ' (p. 202). The test-retest reliability is  $r = .86$  (Brackett & Mayer, 2003). Mayer and colleagues (2004a) argued that the MSCEIT had content validity as the tasks for testing were selected from their four-branch ability theory of emotional intelligence. They argued that structural (factorial) validity is affirmed by 'four-factor solutions reflecting the four branches individually ... provide an excellent fit to the test' (p.

203). In regard to predictive validity Mayer et al. (2004a) argued that emotional intelligence measured as an ability has low correlations,  $r = .35$  and below, with other intelligences,  $r = .30$  and below with self-report emotional intelligence scales, and  $.38$  with the Big Five personality measures (pp. 203-205). Mayer and colleagues (2004a) reported that the MSCEIT has predictive validity, although 'careful demonstrations are necessary of what EI actually does predict' p. 206). It was held that the MSCEIT was weakly related, i.e., displayed little convergent validity, to self-report EI tests (Brackett & Mayer, 2003, p. 9). Finally, Mayer and colleagues argued that there is evidence for the construct validity of the MSCEIT V2.0 and that 'it already surpasses by far that of any other scale in the area of EI', although they note that 'construct validity is generally determined over many years' (Mayer, et al. 2002b, p.43).

Reliabilities of MSCEIT subscales in the results of this study (chapter 4.1.2) showed moderate to high reliabilities. It was reported in section 5.2.4.b, when MSCEIT sample scores were compared with the MSCEIT V2.0 North American general consensus sample reported by Mayer and colleagues (Mayer, et al. 2003), that the reliabilities of the MSCEIT when used with Singapore managers are highly similar with those obtained from the American general consensus sample.

It is a strength therefore, of this research, that the emotional intelligence of managers in Singapore was measured with probably the most robust, reliable, and scientifically valid psychometric emotional intelligence test available today, the MSCEIT.

Second, this research provides quantitative data on the emotional intelligence of managers in Singapore, something not previously attempted. It is argued (Mayer, et al. 2002b, p. 80) that cultural aspects are better reflected in a national norm. The emotional intelligence scores obtained will form the basis for a national Singapore norm of emotional intelligence scores measured by the MSCEIT. Future research (section 6.4.1) has been proposed to set this in motion.

Third, this research provided an analysis of the perceptions of managers and senior executives of corporations in Singapore on the influence and importance of emotional intelligence for organisation effectiveness and individual manager success. The results of this analysis suggest that emotional intelligence is in its infancy as a tool used in organisations in Singapore for predicting star performance, selection, leadership, team building, appraisal, and is not widely promoted in staff training activities. Armed with this new knowledge, researchers can begin the serious task of conducting longitudinal studies that may reinforce the conclusion of this thesis, that emotional intelligence development is essential for employee value propositions and the retention of talent.

To this end, this research has provided a theoretical model, *EASEQuadrant* (chapter 3.7), for classifying and interpreting emotional intelligence scores measured by the MSCEIT. The authors of the ability model of emotional intelligence, Mayer, et al. (2002b), argued that

The MSCEIT could be used with current employees to evaluate their ongoing level of functioning and well-being. This could help indicate the organisational positions for which emotional intelligence is more or less important. The MSCEIT also enables qualified professionals to create tailor-made training programs to improve the emotional skills and functioning of employees and the company as a whole. Afterward, it may be a tool for gauging the impact and effectiveness of organisational training and change (i.e., used before and after training).

The MSCEIT may also be useful in group or team development processes. A large part of effective and smooth teamwork is knowing each member's strengths and weaknesses, and leveraging those strengths whenever possible. Pinpointing and sharing this kind of information can prove to be a bonding experience that unifies, synchronises, and strengthens the group (p. 2).

A case history from the author's client portfolio (chapter 5.6.2) provides strong anecdotal evidence that the MSCEIT can be used for 'evaluating the ongoing level of functioning and well-being' of a senior manager in a large multinational corporation in Singapore, used before and after training. Future research (section 6.4.2) to be conducted in a 12 month longitudinal case study of a large sample of managers in organisations may confirm this to be true.

### **6.3.2 Limitations**

There are four limitations of this study. First, a practical limitation of the study concerned the method of administration. Respondents who completed the online MSCEIT did so by being given the user name and password via email and were then asked to complete the test in their own time. As such, the conditions under which the test was completed were not controlled, so it is not known if conditions were always optimal for test taking of this nature (e.g., time of day, the respondent was in a quiet setting with limited distractions and free from source of bias, the test was completed independently, and the test was completed in one sitting without technological interruptions). It is not known if all tests were completed on the first attempt and within the time limits set by the publishers. It may have been preferable to have had respondents complete the test in group sessions where the best test conditions could have been assured and supervision provided during the completion of the tests.

Second, the study was limited to the MSCEIT, a performance-based measure of emotional intelligence, of which the author was accredited to administer a research version. It was not known how many, if any, of the respondents involved with the norming of the North American MSCEIT sample were managers. Being an exploratory study, it was determined by the author that the MSCEIT would meet the aims of this research, to measure the emotional intelligence mental abilities of local and Western managers in Singapore.

Third, the small sample size (139 respondents, with 86 completing the MCEIT) is a limitation of this study and conclusions drawn from this study should be interpreted with caution until further research confirms these results.

Fourth, financial constraints prevented the author travelling to North America to become accredited to administer additional test instruments. A future 12 month longitudinal case study of the emotional intelligence of a sample of managers in organisations in Singapore is proposed (section 6.4.2). Such a study would measure the three established dimensions of emotional intelligence (nonintellective abilities, competencies, and mental abilities) of each manager and require the testing and administration of at least three psychometric instruments.

#### **6.4 Directions for future research**

Directions for future research that arise directly from this thesis include,

1. Utilising the database of emotional intelligence scores of managers in this sample in Singapore to establish a Singapore norm for MSCEIT scores. The need to establish Singaporean normative data for the MSCEIT V2.0 (Mayer, et al. 2003) is central to facilitate comparisons of emotional intelligence scores with a national norm that ensures cultural aspects are integrated into what the instruments measure. This is consistent with locating measures of emotional intelligence in different cultures (Palmer, 2003a, p. 181).
2. Examining the degree to which increased emotional intelligence empowers behavioural change through testing before and after training programs. The authors of the MSCEIT (Mayer, et al. 2002b) argued that,

By administering the MSCEIT periodically, the administrator can track the respondent's possible changes in skill level. Skill changes occur gradually, and it is likely that several months

would be necessary before any detectable changes might occur (p. 10).

3. Conducting factor analysis of the eight components of emotional leadership identified in the *EASEQuadrant* interpretive framework to assess the extent to which the structure of the *EASEQuadrant* is consistent with predicting validity of the eight tasks of the emotional intelligence mental abilities measured by the MSCEIT.
4. Comparing the emotional intelligence of managers in Singapore measured using the EQ-i (Bar-On, 1997a,b); ECI (Boyatzis, et al., 2000), and MSCEIT (Mayer, et al. 1999) psychometric measures.
5. Examining the relationship between leader behaviour and emotional intelligence, scored as a mental ability and as an emotional competency, to identify attributes that promote emotional leadership for improved organisation effectiveness and individual performance.

Items 1 and 2 above are now discussed further as opportunities for future research arising directly from this thesis:

6.4.1 Establishing Singapore normative data for the MSCEIT

6.4.2 Research into the utility of emotional intelligence testing

Future research in these two areas, where established and enhanced psychometric emotional intelligence testing and classification and interpretation of scores using *EASEQuadrant* can be replicated, will lead to improved individual emotional intelligence testing, development, and behaviour that predicts important outcomes in the workplace.

#### **6.4.1 Establishing Singapore normative data for the MSCEIT**

This study, in chapter 5.2.4b, explored a comparison of the Singapore sample mean and standard deviation with the North American norm consensus

general mean and standard deviation. Results showed that the emotional intelligence of local and Western managers in Singapore did not differ significantly from the American general consensus sample, a research study group norm of 5000 respondents, mainly from North America. The comparison adds to the value of the MSCEIT as a measure of emotional intelligence (Mayer, et al., 2003) and points to future directions for research, specifically the need to establish Singaporean normative data for the MSCEIT V2.0 (Mayer, Salovey, Caruso, & Sitarenios, 2003) to facilitate comparisons of emotional intelligence scores with a national norm that account for cultural values.

In addition to establishing Singapore normative data for comparison of emotional intelligence test results, newly developed and existing emotional intelligence tests must ensure that cultural aspects are integrated into what the instruments measure. The literature on emotional intelligence highlighted the importance of cultural aspects on emotional intelligence (Druskat & Wolff, 2001). Physiological arousal and its manifestation as emotion will depend on cultural guides. Emotional intelligence represents additional present-day cultural values (Matthews et al. p. 7). Differences in individual identity, i.e., beliefs, values, memory, expectations, and thoughts (Gosling & Gosling, 2004), conditioned through social and cultural learning will also influence how an event is appraised and what response, emotion, or behaviour is evoked.

Saarni (2000) said, 'As a social constructivist ... we learn to give meaning to our context-dependent emotional experience via our social exposure to emotion ... Our unique social history includes our immersion in our culture's beliefs ... ' (p. 73). Ashforth & Humphrey (1995) argued that culture represents '... beliefs about emotional states, a vocabulary for discussing them, and a set of socially acceptable attributions for the states' (p. 100). Mayer, Caruso, & Salovey (2000) argued too that '... there are both evolutionary and cultural foundations for the consistency of emotionally signalled information' (p. 326). Palmer (2003a) argued that the integration of culture into psychometric measures of emotional intelligence is partially remedied through establishing national norms for comparison of test results. In a study that proposed a five-factor taxonomy for

emotional intelligence, Palmer (2003a) established Australian normative data for emotional intelligence testing.

Future research on emotional intelligence in Singapore using a national norm may include:

1. The development of Singaporean normative data for comparing emotional intelligence measured using existing instruments, e.g., (1) the Mayer-Salovey-Caruso Emotional Intelligence test (MSCEIT; Mayer, et al. 1999); and (2) the Bar-On Emotional Quotient Inventory (EQ-i; Bar-On, 1997a,b).
2. A comparison of the emotional intelligence of managers measured by the MSCEIT with the Singaporean norm.
3. Examination of the extent to which the factor structure of emotional intelligence measures, such as the MSCEIT (Mayer, et al. 1999), can be located in Singaporean culture.

#### **6.4.2 Research into the utility of emotional intelligence testing**

Three contexts for the study of emotional intelligence were outlined in chapter 2: psychometric, theoretical, and applied (Matthews, et al. 2002, pp. 23-29). This study has focused on the applied use or utility of emotional intelligence for everyday living; behaving with emotional intelligence in the workplace. Cooper & Sawaf (1997) enunciated well what it is to behave with emotional intelligence:

When you *think* about (qualities of emotional intelligence), such attributes are little more than an ideology or principles or good ideas; it's only when you deeply *feel* them that they become active and real, and you are compelled to *act* upon them, to live them (p. xxiii).

To provide practitioners of emotional intelligence with the right tools to help clients and employees *feel* their emotional intelligence qualities and *act* on

them, future scientific research needs to develop clearer definitions of emotional intelligence and psychometric instruments that target specifically the separate component parts of the applied construct.

Historically, three major approaches to the applied use of emotional intelligence (chapter 2.2) have evolved since the 1980s based on different roots (Caruso, 2004). In order of historical appearance they are:

1. A nonintellective (trait) approach of self-perceived emotional intelligence developed by Bar-On (1997a,b) in the 1980's, measured using the EQ-i: Emotional Quotient Inventory. Caruso (2004) said that Bar-On 'early interests seemed to be on a concept called subjective well-being and on non-intellective aspects of performance' (p. 1).
2. A mental ability approach to emotional intelligence developed by Mayer and Salovey (Mayer & Salovey, 1997; Salovey & Mayer, 1990) in the 1990's, measured with the MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test. Mayer and colleagues came from a psychology background. Caruso (2004) reported that Jack Mayer was trained in both clinical and experimental psychology, and worked in the areas of human intelligence as well as cognition and affect and its various applications ... Colleague Peter Salovey had similar interests in cognition and affect (Caruso 2004, p. 1).
3. An emotional intelligence competency model, developed by Goleman (1995, 1998a, 2001b) who based his theory on EI competencies in a performance based model. The competency model is measured using the ECI: Emotional Competency Inventory, developed by Goleman with Boyatzis (Boyatzis, et al. 2000) and the Hay Group (2005). Caruso (2004) disclosed that Goleman was 'a student of David McClelland, one of the most influential psychologists in the area of competencies' (p. 1).

This study provided emotional intelligence scores for managers in Singapore using the mental ability approach to emotional intelligence (Mayer & Salovey, 1997; Salovey & Mayer, 1990) and the psychometric instrument developed by the authors, the MSCEIT (Mayer, et al. 2002b). The MSCEIT was chosen for use by in this study because the author is certified to administer it. In addition, at the time of the commencement of this study, July 1999, the MSCEIT was the most clearly defined and scientifically proven actual mental ability construct of emotional intelligence available.

Nevertheless, this thesis argues that the MSCEIT on its own does not provide practitioners of emotional intelligence the complete picture of emotional intelligence of a person needed to assist managers and leaders in their development of emotionally intelligent behaviour in the workplace.

In practice, the author of this study assesses his own clients using both the MSCEIT and EQ-i instruments to provide the client with both an objective (performance-based) and subjective (self-perceived) view of his or her emotional intelligence. This combined assessment, with an explanation of the test results, assists the client to integrate and understand what are to most people, complex ideas about the brain, emotion, and human functioning. Coaching the client in developing emotionally intelligent behaviour, feeling their qualities of emotional intelligence, is enhanced through discussing with them their results from psychometric emotional intelligence testing (see case history, chapter 5.6.2). Additionally, the author of this study argues that what is needed by clients is feedback from manager(s), peers, and direct reports to supplement and inform performance-based and self-perceived emotional intelligence assessments.

In the Australian context, the Genos EI test is based on normative data for the Australian population. Palmer (2003a) argued,

The current findings suggest that while categorical distinctions between various models such as 'mixed'/'trait' and 'ability'/'information processing' EI are useful in organising the various approaches to the construct, that these two categories should

not be considered fundamentally distinct constructs. In contrast, it could be concluded that existing models of EI tend to compliment, rather than contradict one another (Ciarrochi, et al. 2000), and that further research toward establishing a taxonomy for EI is thus warranted.

It may be possible in future to establish a single taxonomy of emotional intelligence, with a more 'comprehensive battery of measures ... to better identify a general taxonomy of EI' (Palmer, 2003a, p.177). But Palmer himself acknowledged that 'the construct of EI is in its infancy in comparison to constructs such as personality and intelligence (IQ)' (Palmer 2003a, p. 189). Palmer's proposed taxonomy of emotional intelligence as it is developed may consolidate the current disparate models and measures of emotional intelligence discussed in this thesis in the Australian context. However, whilst the various models of emotional intelligence may not contradict each other directly (Ciarrochi, et al. 2000), they seem to this author to measure different aspects of personality, which according to Mayer and colleagues comprised some 400 parts (Mayer, Salovey & Caruso, 2000a, p. 414). Given the established positions of the original authors in the field – Bar-On, Mayer and colleagues, and Goleman and Boyatzis, their specific models and measures of emotional intelligence, and the now considerable commercial involvement in emotional intelligence assessments and training, constructing a taxonomy for emotional intelligence seems at present an enormous task.

In addition to their proposed taxonomy for emotional intelligence, Palmer & Stough (2005) have argued for the utility of multi-rater 360-degree emotional intelligence assessment instruments, such as the Genos EI assessment scale, in the context of using emotional intelligence assessments for leadership development purposes. They argue that multi-rater measures of emotional intelligence are one of the most valuable methods of measuring emotional intelligence in the workplace. Mayer, Caruso & Salovey (2000) have argued against multi-rater measures of emotional intelligence suggesting they do not provide a true measure of one's actual emotional intelligence ability. Mayer and colleagues (2000), have

argued that self-ratings (in a multi-rater program) are filtered through the individual's self-concept and as such provide an indication of their beliefs about the emotional intelligence, (or perceived emotional intelligence), rather than their actual capacity. Palmer and Stough (2005) counter that the question that remains unanswered is what is more important in terms of leadership effectiveness and/or success and the prediction thereof, the leader's actual EI ability, or the extent to which they demonstrate emotionally intelligent behaviour at work? (p. 2).

The author of this study argued (Gosling & Gosling, 2004) that actual emotional intelligence mental ability, as measured by the Mayer, et al. (2002b) MSCEIT psychometric instrument, drives a leader's emotionally intelligent behaviour in the workplace. The leader who exercised emotional leadership was doing so from his or her recognition and developed understanding of actual emotional skills measured by the MSCEIT. However, Mayer and colleagues (Mayer, et al. 2002b, p. 3) recommend that the MSCEIT be used as part of a larger evaluation process together with other assessment methods and information, such as, interviews, other assessment tools, and behavioural observations. Results obtained by the use of the MSCEIT, they argue, should be viewed as important focal points, and examined further using additional methods, thereby providing a better-balanced and broader picture of the respondent.

In this regard, where multi-rater emotional intelligence assessments, such as the Genos-360 and Goleman/Boyatzis/Hay Group ECI (Boyatzis, et al. 2000; Goleman, 2001b), are important tools is that they inform the manager/leader and the emotional leadership coach where applicable of the perceived views of his or her emotional intelligence from peers, managers, and/or direct reports. That is, they provide additional assessment and collateral information to provide a better-balanced picture of the leader. In addition, the Bar-On EQ-i (Bar-On, 1997a) informs the manager/leader and the emotional leadership coach where applicable of the leader's self-perceived view of his or her emotional intelligence. In sum, the leader has a battery of tests namely, the MSCEIT, ECI or Genos-360, and EQ-i that inform him or her on emotional intelligence mental abilities, competencies, and traits, respectively. An emotional leadership coach trained in the three

approaches and measurement instruments of the emotional intelligence construct would assist the leader to classify and interpret these several components and assessments to promote emotionally intelligent behaviour in the workplace (see case history, chapter 5.6.2).

This study argues that it is doubtful that a single test, whether it be an ability, competency, or multi-rater emotional intelligence test, such as the Genos-360 based on Palmer's (2003) proposed taxonomy of emotional intelligence, could provide a comprehensive assessment of an individual's emotional intelligence as would a combined set of tests that intercorrelate the several parts of emotional intelligence.

Practitioners would benefit from future research in the applied use of emotional intelligence that provided:

1. An integrated definition of emotional intelligence, its 'nature and boundaries' (Palmer, 2003a, p. 191), with its subcomponent parts: non-intellective traits, competencies, and mental abilities (Caruso, 2004), and
2. A set of psychometric instruments that assess 'conceptually related yet empirically distinct dimensions of emotional intelligence' (Palmer, 2003a, p. 185):
  - a. An objective, more dynamic, mental ability (performance-based) emotional intelligence test;
  - b. An emotional intelligence competency test that facilitates 360 degree feedback from peers, manager, subordinates, and direct reports; and
  - c. A self-report emotional intelligence test that provides individuals a subjective self-perceived assessment of their emotional intelligence.

This future research would facilitate the explanation and training to managers on *how* to develop emotional intelligence. Integration and understanding of emotional intelligence by the manager will be enhanced greatly when these instruments can be used in conjunction with one another in a meaningful way.

Specifically, this study proposes future research be conducted in a longitudinal study to examine the degree to which increased emotional intelligence empowers behavioural change through testing at the commencement and at the end of training programs. As mentioned earlier in this section, the authors of the MSCEIT (Mayer, et al. 2002b) argued that,

By administering the MSCEIT periodically, the administrator can track the respondent's possible changes in skill level. Skill changes occur gradually, and it is likely that several months would be necessary before any detectable changes might occur (p. 10).

There is anecdotal evidence (chapter 5.6.2), from clients attending the author's behavioural coaching practice, which suggests that increased emotional intelligence empowers behavioural change in managers. Future research to confirm this predicted outcome of emotional intelligence development should be conducted in a 12 month longitudinal case study of a sample of managers in organisations and proceed in the following stages:

1. Set behavioural change objectives, in consultation with the manager and immediate superior (at least two per individual manager).
2. Managers complete an assessment of their emotional intelligence, using the MSCEIT and EQ-i, psychometric tools; The MSCEIT being a measure of actual emotional intelligence ability, and the EQ-i being a measure of self-perceived emotional intelligence (Mayer, Salovey & Caruso, 2004a).
3. Managers attend the *EASEQuadrant* two-day workshop or equivalent emotional leadership coaching. Emotional intelligence scores are

explained, using the EASEQuadrant grid. New emotional knowledge is learned and practised, applying emotional intelligence skills and competencies.

4. Each manager commits to an individual 12 month coaching program that includes two 360 degree feedback reports, as observed and reported by peers, on emotional intelligence competencies, one report at six months and one at 12 months, using the ECI (Hay Group, 2005) or Genos-360 multi-rater 360-degree emotional intelligence assessment instrument for informant reporting (Palmer & Stough, 2005; Genos, 2005).
5. Managers complete a second assessment of their emotional intelligence abilities using the MSCEIT and EQ-i psychometric tools.
6. Analysis of results.

The results of this thesis suggest that managers in Singapore had average emotional intelligence as compared to the North American norm and that there was no substantive difference in emotional intelligence abilities of Chinese Singaporean managers and their Western counterparts. Further, the study showed that there is considerable room for improvement in the emotional skills of managers in Singapore, but organisations in Singapore have not set emotional intelligence as a priority in their learning and development programs.

In addition, this thesis has proposed a new emotional leadership practice (ELP) theory of emotional intelligence development, incorporating the EASEQuadrant model for profiling and interpreting improvements in emotional intelligence mental ability scores measured by the MSCEIT (Mayer et al. 2002b) at two points in time, to coach and train managers in emotional intelligence development. If this model is further established by future research an important next step would be to devise a comprehensive coaching/training program for practitioners and corporate learning and development directors that incorporates

both performance-based (ability) and self-report (competency) measures of emotional intelligence.

Palmer (2003a), whose Genos EI self-report model of emotional intelligence has wide support in measuring workplace emotional intelligence, has pointed out that these different approaches to the measurement of emotional intelligence may need to complement one another, rather than form one measure, due to the perceived difficulties of tapping inner processes of emotions highlighted by the authors of the MSCEIT (Mayer et al. 2000). As this thesis has been concerned with the applied context (Matthews et al. 2002) for emotional intelligence, developments in the psychometric and theoretical arenas of emotional intelligence will be watched closely to see how further research may best help clients improve emotional skills through the development of emotional intelligence practice.

## Chapter 6 – Conclusions

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## REFERENCES

- Abraham, J 2001, *Strategy of preeminence*, DVD viewed 25 February 2006, Abraham Publishing Group, CA.
- Agresti, A & Finlay, B 1997, *Statistical Methods for the Social Sciences*, 3<sup>rd</sup> edn, Prentice Hall, New Jersey.
- Allworth Juniper, 2003, 'Emotional intelligence: An update from the 5<sup>th</sup> Australian Industrial and Organisational (I/O) Psychology Conference', in *Bringing psychology to work*, No. 8, Winter, Melbourne, viewed 11 February 2005, <[http://www.allworthjuniper.com.au/newsletters/issue\\_8\\_winter\\_2003.pdf](http://www.allworthjuniper.com.au/newsletters/issue_8_winter_2003.pdf)>.
- Aronson, J 1994, 'A Pragmatic View of Thematic Analysis', viewed 24 February 2006, in *The Qualitative Report*, vol. 2, No. 1, Spring <<http://www.nova.edu/ssss/QR/BackIssues/QR2-1/aronson.html>>
- Ashforth, BE & Humphrey, RH 1995, 'Emotion in the workplace: A reappraisal', in *Human Relations*, vol. 48, no. 2, pp. 97-125.
- Ashkanasy, NM & Daus, CS 2002, 'Emotion in the workplace: The new challenge for managers', *Academy of Management Executive*, vol. 16, no. 1, pp. 76-86.
- Averill, JR 1994, 'In the eyes of the beholder', in *The nature of emotion. Fundamental questions*, eds P Ekman & RJ Davidson 1994, Oxford University Press, New York, pp. 7-14.
- Avolio, BJ Waldman DA & Yammarino, FJ 1991, 'The four I's of transformational leadership', *Journal of European Industrial Training*, vol. 15, no. 4, pp. 9-16.
- Bagby, RM, Taylor, GJ & Parker, JDA 1994, 'Toronto Alexithymia Scale – TAS-20: Item selection and cross-validation of the factor structure', *Journal of Psychosomatic Research*, vol. 38, pp. 23-32.

## References

- Bandler, R & Grinder J 1975, *The structure of magic I*, Science and Behavior Books, Palo Alto, California.
- Bandler, R & Grinder J 1976, *The structure of magic II*, Science and Behavior Books, Palo Alto, California.
- Barling, J, Slater, F & Kelloway, E K 2000, 'Transformational leadership and emotional intelligence: An exploratory study', *Leadership & Organization Development Journal*, vol. 21, no. 3, pp. 157-161.
- Bar-On, R 1997a, *BarOn emotional quotient inventory, Technical manual*, Multi-Health Systems Inc, Toronto, Canada.
- Bar-On, R 1997b, *BarOn emotional quotient inventory, User's manual*, Multi-Health Systems Inc, Toronto, Canada.
- Bar-On, R 2000, 'Emotional and social intelligence: Insights from the emotional quotient inventory', in *The handbook of emotional intelligence*, eds R Bar-On & JDA Parker, Jossey Bass, San Francisco, pp.363-388.
- Bar-On, R 2001, 'Emotional intelligence & self-actualization', in *Emotional intelligence in everyday life: A scientific enquiry*, Psychology Press, New York, pp. 82-97.
- Bar-On, R, Brown, JM, Kirkcaldy, BD & Thomé, EP 2000, 'Emotional expression and implications for occupational stress; an application of the Emotional Quotient Inventory (EQ-i)', *Personality and Individual Differences*, Vol.28, no.6, pp.1107-1118.
- Bar-On, R & Parker, JDA (eds) 2000, *The handbook of emotional intelligence*, Jossey-Bass, San Francisco.
- Bar-On, R Tranel, D, Denburg, NL & Bechara, A 2003, 'Exploring the neurological substrate of emotional and social intelligence', in *Brain*, vol. 126, pp. 1790-1800.

- Bartlett, CA & Ghoshal, S 1992, 'What is a Global Manager?', *Harvard Business Review Classic*, August 2003, pp. 101-108.
- Bass BM 1985, *Leadership and performance beyond expectation*, Free Press, New York.
- Bass, BM 1990, *Bass and Stogdill handbook of leadership*, Free Press, New York.
- Bass, BM 1997, 'Does the transactional-transformational leadership paradigm transcend organizational and national boundaries?', *American Psychologist*, vol. 52, no. 2, pp. 130-139.
- Bass, BM 1997, 'The ethics of transformational leadership', in *Kellogg Leadership Studies Project Transformational Leadership Working Papers*, Academy of Leadership, viewed 30 September 2006, <[http://www.academy.umd.edu/publications/klspdoc/bbass\\_pl.htm](http://www.academy.umd.edu/publications/klspdoc/bbass_pl.htm)>.
- Beck, AT 1976, *Cognitive therapy and the emotional disorders*, International Universities Press, New York.
- Beck, AT 1991, 'Cognitive therapy. A 30 year retrospective', *American Psychologist*, vol. 46, no. 4, pp. 368-375.
- Beck, AT 1993, 'Cognitive therapy: Past, present, and future', *Journal of Consulting and Clinical Psychology*, vol. 61, no. 2, pp. 194-198.
- Beck, JS 1995, *Cognitive therapy: Basics and beyond*, The Guildford Press, New York.
- Bernhut, S 2002, 'Primal leadership, with Daniel Goleman', *Ivey Business Journal*, May-June, pp. 14-15.
- BOEI: Benchmark of Organisational Emotional Intelligence, viewed 30 April 2005, <<http://www.vanrooyen.co.za/Catalogue/BOEI.htm>>.
- Boyatzis, RE, Goleman, D & Rhee, KS 2000, 'Clustering competence in emotional intelligence. Insights from the emotional competency inventory', in

## References

- The handbook of emotional intelligence*, eds R Bar-On & JDA Parker, Jossey Bass, San Francisco, pp.343-362.
- Brackett, MA & Mayer, JD 2003, 'Convergent, discriminant, and incremental validity of competing measures of emotional intelligence', *Personality and Social Psychology Bulletin*, Vol.29, pp.1147-1158.
- Brackett, MA, Mayer, JD & Warner, RM 2004, 'Emotional intelligence and its relation to everyday behaviour', in *Personality and Individual Differences*, Vol. 36, pp.1387-1402.
- Brody, N 2004, 'What cognitive intelligence is and what emotional intelligence is not', *Psychological Inquiry*, vol. 15, pp. 234-238.
- Brown, K 2005, 'Emotional intelligence. Is it ready for the workplace?', in *Human Resources*, 5 April 2005, pp. 16-17.
- Burns, JM (1978) *Leadership*, Harper & Row, New York.
- Caruso, D 2004, 'Comment on RJ Emmerling and D Goleman, Emotional intelligence: Issues and common misunderstandings. Defining the inkblot on emotional intelligence', viewed 30 October 2004, *Issues in emotional intelligence*, <<http://www.eiconsortium.org>>.
- Caruso, D 2005, 'There are many definitions of emotional intelligence', viewed 15 April 2005, *Overview of emotional intelligence*, <<http://www.emotionaliq.org/EI.htm>>.
- Caruso, DR, Mayer, JD & Salovey, P 2001, 'Emotional intelligence and emotional leadership', in *Multiple intelligences and leadership*, eds R Riggio, S Murphy, & FJ Pirozzolo, Lawrence Erlbaum Associates, New Jersey, pp. 55-74.
- Caruso, DR, Mayer, JD & Salovey, P 2002, 'Relation of an ability measure of emotional intelligence to personality', *Journal of Personality Assessment*, vol. 79, pp. 306-320.

- Caruso, D & Salovey, P 2004, *The emotionally intelligent manager*, Jossey-Bass, San Francisco.
- Caudron, S 1999, *The hard case for soft skills*, viewed 4 November 2004, Monster HR, <<http://hr.monster.com/articles/hardcase/>>.
- Cavallo, K 2004, 'Emotional competence and leadership excellence at Johnson & Johnson: The emotional intelligence and leadership study', viewed December 2004, *Issues in emotional intelligence*, <<http://www.eiconsortium.org>>.
- Cavallo, K & Brienza, A 2004, Emotional competence and leadership excellence at Johnson & Johnson: The emotional intelligence & leadership study, viewed 2 March 2006 <[http://www.eiconsortium.org/references/jj\\_ei\\_study.htm](http://www.eiconsortium.org/references/jj_ei_study.htm)>.
- Chambers, EG, Foulon, M, Handfield-Jones, H & Hankin, SM 1998, 'The war for talent', *The McKinsey Quarterly*, no. 3, pp. 44-57.
- Chan, KB Lai, G Ko, YC & Boey, KW 2000, 'Work stress among six professional groups: The Singapore experience', *Social Science & Medicine*, vol. 50, pp. 1415-1432.
- Cherniss, C 2000, 'Emotional intelligence: What it is and why it matters', in *The Annual Meeting of the Society for Industrial and Organisational Psychology*, New Orleans, LA, pp. 1-14.
- Cherniss, C 2001, 'Emotional intelligence and organizational effectiveness', in eds, C Cherniss, & D Goleman, *The emotionally intelligent workplace. How to select for, measure, and improve emotional intelligence in individuals, groups, & organizations*, Jossey-Bass, San Francisco, pp. 3-12.
- Cherniss, C 2004, 'The business case for emotional intelligence', *Issues in emotional intelligence*, viewed 30 October 2004, <<http://www.eiconsortium.org>>.
- Cherniss, C & Adler, M 2000, *Promoting emotional intelligence in organisations*, The American Society for Training & Development Press, Alexandria, Virginia.

## References

- Cherniss, C & Goleman, D 1998, 'Bringing emotional intelligence to the workplace', *A technical report issued by The Consortium for Research on Emotional Intelligence in Organizations*, <<http://www.eiconsortium.org/>>.
- Cherniss, C & Goleman, D (eds) 2001, *The emotionally intelligent workplace. How to select for, measure, and improve emotional intelligence in individuals, groups, & organizations*, Jossey-Bass, San Francisco.
- Chopra, D 2004, *The soul of leadership*, Nanyang Business Review, Special Global Brand Forum edn, pp. 19-27.
- Chu, T S & Kwan, E 1999, 'Building intellectual capital ... for future careers', *The Alumnus*, July, NUS, Singapore.
- Ciarrochi, J, Caputi, P & Mayer, JD 2003, 'The distinctiveness and utility of a measure of trait emotional awareness', *Personality and Individual Differences*, vol. 34, pp. 1477-1490.
- Ciarrochi, J, Chan, AYC, Caputi, P 2000, 'A critical evaluation of the emotional intelligence construct', *Personality and Individual Differences*, vol. 28, pp. 539-561.
- Ciarrochi, J, Chan, AYC, Caputi, P & Roberts, R 2001, 'Measuring emotional intelligence', in *Emotional intelligence in everyday life: A scientific enquiry*, eds J Ciarrochi, JP Forgas & JD Mayer, Psychology Press, New York, pp. 25-45.
- Cloud, J 2006, 'Happiness isn't normal. What's the best form of psychotherapy? How can you overcome sadness? Controversial psychologist Steven Hayes has an answer: embrace pain', *Time Magazine*, 13 February, 8 pages.
- Cobb, C & Mayer, JD 2000, 'Emotional intelligence: What the research says', *Educational Leadership*, vol.58, pp.14-18. [Reprinted in Duffy, KG ed, *Annual Editions: Psychology*, 02/03, 32nd edn, McGraw-Hill/Duskin, Guilford, CT, pp. 113-117.

- Cooper, RK & Sawaf, A 1997, *Executive EQ: emotional intelligence in leadership and organisations*, Berkley Publishing Group, New York.
- Cossar, L 2002, 'IQ? 'But how does your EQ rate?', *Business Review Weekly*, 22/8/2002, pp. 68-70.
- Covey, SR 1989, *The seven habits of highly effective people: Powerful lessons in personal change*, Simon & Schuster, London.
- CREIO, 2004 – 'The emotional competence framework', viewed 30 October 2004, *Issues in emotional intelligence*, <<http://www.eiconsortium.org>>.
- CREIO, 2005 – The Consortium for Research on Emotional Intelligence in Organisations, viewed 15 April 2005, <<http://www.eiconsortium.org>>.
- Damasio, AR 1994, *Descarte's error: Emotion, reason, and the human brain*, Avon Books, New York.
- Darwin, C 1872/1998, *The expression of the emotions in man and animals. Definitive edition*. Introduction, Afterword, and Commentaries by Paul Ekman, Oxford University Press, Oxford.
- Davies, M, Stankov, L & Roberts, R 1998, 'Emotional intelligence. In search of an elusive construct', *Journal of Personality and Social Psychology*, vol.75, no.4, pp. 989-1015.
- Day, A L & Carroll, S A 2004, 'Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviours', *Personality and Individual Differences*, vol. 36, pp. 1443-1458.
- Dearlove, D 2003, 'Maxed emotions. An interview with Daniel Goleman', *Business Strategy Review*, vol. 14, no. 2, pp. 26-32.
- Digman, JM 1990, 'Personality structure: Emergence of the five-factor model', *Annual Review of Psychology*, vol. 41, pp. 417-440.
- Drucker, PF 1966, *The effective executive*, HarperCollins, New York.

## References

- Drucker, PF 1974, *Management: Tasks, Responsibilities, Practices*, Harper & Row, New York.
- Drucker, PF & Maciariello, JA 2006, *The effective executive in action*, HarperCollins, New York
- Druskat, VU, Sala, F & Mount, G eds 2006, *Linking emotional intelligence and performance at work. Current Research Evidence With Individuals and Groups*, Lawrence Erlbaum Associates, Mahwah, NJ.
- Druskat, V & Wolff, S 2001, 'Group emotional intelligence and its influence on group effectiveness', in eds, C Cherniss, & D Goleman, *The emotionally intelligent workplace. How to select for, measure, and improve emotional intelligence in individuals, groups, & organizations*, Jossey-Bass, San Francisco, pp. 132-155.
- Dulewicz, V & Higgs, M 2000, *EIQ-Managerial User Guide*, NFER-Nelson, Windsor, UK.
- Dulewicz, V & Higgs, M 2003, 'Leadership at the top: The need for emotional intelligence in organizations', *The International Journal of Organizational Analysis*, vol. 11, no. 3, pp. 193-210.
- Dulewicz, V, Higgs, M & Slaski, M 2003, 'Measuring emotional intelligence: content, construct and criterion-related validity', *Journal of Managerial Psychology*, vol. 18, no. 5, pp. 405-420.
- Earley, PC & Mosakowski, E 2004, 'Cultural intelligence', *Harvard Business Review*, vol. 82, no. 10, p. 139.
- Einspruch, EL & Forman, BD 1985, 'Observations Concerning Research Literature on Neuro-Linguistic Programming', *Journal of Counseling Psychology*, vol. 32, no. 4, pp. 589-696.
- Eisenberg, D 2002, 'The softer side. A great boss needs EQ, not just IQ, a new book argues', *TIME Magazine Archive*, Feb 11, viewed 9 November 2004, <<http://time-proxy.yaga.com>>.

- Ekman, P 1992, 'An argument for basic emotions', *Cognition and Emotion*, vol.6, no. 3/4, pp. 169-200.
- Ekman, P 1994, 'All emotions are basic', in *The nature of emotion, fundamental questions*, eds P Ekman & RJ Davidson RJ, Oxford University Press, New York, pp. 15-19.
- Ekman, P & Davidson RJ (eds) 1994, *The nature of emotion. Fundamental questions*, Oxford University Press, New York.
- Ellis, A 1962/1994, *Reason and emotion in psychotherapy*, Citadel Press, Secaucus, NJ.
- Ellis, A 1985, 'Cognition and affect in emotional disturbance', *American Psychologist*, vol. 40, no. 4, pp. 471-472.
- Ellis, A 1992, 'My early experiences in developing the practice of psychology', *Professional Psychology: Research and Practice*, vol. 23, no. 1, pp. 7-10.
- Ellis, A 1993a, 'Reflections on rational-emotive therapy', *Journal of Consulting and Clinical Psychology*, vol. 61, no. 2, pp. 199-201.
- Ellis, A 1999, 'Why rational-emotive therapy to rational emotive behaviour therapy?', *Psychotherapy*, vol. 36, no. 2, pp. 154-159.
- Ellis, A 2003, 'Early theories and practices of rational emotive behavior therapy and how they have been augmented and revised during the last three decades', *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, vol. 21, nos. 3/4, pp. 219-243.
- Ellis, A Shaughnessy, MF & Mahan, V 2002, 'An interview with Albert Ellis about rational emotive behavior therapy', *North American Journal of Psychology*, vol. 4, no. 3, pp. 355-366.
- Ellsworth, PC 1994, 'Levels of thoughts and levels of emotion', in Ekman, P & Davidson RJ eds *The Nature of Emotion, Fundamental Questions*, Oxford University Press, New York. pp. 192-196.

## References

- Emmerling RJ & Goleman, D 2003, *Emotional intelligence: Issues and common misunderstandings*, The Consortium for Research on Emotional Intelligence in Organizations, viewed 30 October 2004, <<http://www.eiconsortium.org>>.
- Exley, M 2000, 'Brush up your career prospects', in *Management Today*, May, p. 96.
- Fairclough, N 1989, *Language and power*, Longman, Harlow.
- Feldman, DA 1999, *The handbook of emotionally intelligent leadership. Inspiring others to achieve results*, Leadership Performance Solutions Press, Virginia.
- Fiedler, FE 1967, *A theory of leadership effectiveness*, McGraw-Hill, New York.
- Fineman, S 2004, 'Getting the measure of emotion – and the cautionary tale of emotional intelligence', *Human Relations*, vol. 57, no. 6, pp. 719-741.
- Fleishman, EA Mumford, MD, Zaccaro, SJ Levin, KY Korotkin, AL & Hein, MB 1991, 'Taxonomic efforts in the description of leader behavior: a synthesis and functional interpretation', *Leadership Quarterly*, vol. 2, no. 4, pp. 245-287.
- Fleming, JH, Coffman, C & Harter, JK 2005, 'Manage your human sigma', *Harvard Business Review*, July-August, Reprint R0507J, pp. 1-9.
- Fox, C 2003, 'Gauging employees' emotional well-being', *Australian Financial Review*, <[http://www.genos.com.au/PDF/Guaging\\_Employees\\_AFR.pdf](http://www.genos.com.au/PDF/Guaging_Employees_AFR.pdf)>.
- Fox, C 2004, 'Shifting gears. Those strong silent types learn how to communicate as Holden unveils its latest workplace model', *Human Resources*, August, pp. 28-31.
- Freedman, J 2005, 'Have the originators of EI missed the point of their own research?', viewed 12 April 2005, *Emotional intelligence information*, <[http://www.unh.edu/emotional\\_intelligence/eicontroversy1b.htm](http://www.unh.edu/emotional_intelligence/eicontroversy1b.htm)>.

- Furnham, A & Petrides, KV 2003, 'Trait emotional intelligence and happiness', *Social Behavior and Personality*, viewed 16 September 2006, <[http://findarticles.com/p/articles/mi\\_qa3852/is\\_200301/ai\\_n9209294](http://findarticles.com/p/articles/mi_qa3852/is_200301/ai_n9209294)>.
- Gardner, H 1983, *Frames of mind: The theory of multiple intelligences*, Basic Books, New York.
- Gardner, H 1999, *Intelligence reframed*, Basic Books, New York.
- Gardner, L & Stough, C 2001, 'Examining the relationship between leadership and emotional intelligence in senior level managers', *Leadership & Organization Development Journal*, vol. 23, no. 2, pp. 68-78.
- Garret, TC Buisson, DH & Yap, CH 2006, 'National culture and R&D and marketing integration mechanisms in new product development: A cross-cultural study between Singapore and New Zealand', *Industrial Marketing Management*, vol. 35, pp. 293-307.
- Genos Pty Ltd, 2005, viewed 21 April 2005, <<http://www.genos.com.au/EI/>>.
- George, JM 2000, 'Emotions and leadership: The role of emotional intelligence', *Human Relations*, vol. 53, no. 8, pp. 1027-1056.
- Gibbs, N 1995, 'The EQ Factor; new brain research suggests that emotions, not IQ, may be the true measure of human intelligence', *TIME*, Oct 2, pp. 60-68.
- Gignac, GE 2005, 'Evaluating the MSCEIT V2.0 via CFA: Comment on Mayer et al. (2003)', *Emotion*, vol. 5, no. 2, pp. 233-235.
- Goh C T, 2000, English text of Prime Minister's National Day Rally 2000 Speech in Mandarin,' Singapore Government Media Release, <<http://www.gov.sg/nd/ND00Chi-trans.htm>>.
- Goldsmith, M & Morgan, H 2004, 'Leadership is a contact sport', *Strategy + Business*, vol. 36, September, pp. 70-79.
- Goleman, D 1995, *Emotional intelligence. Why it can matter more than IQ*, Bantam Books, New York.

## References

- Goleman, D 1998a, *Working with emotional intelligence*, Bantam Books, New York.
- Goleman, D 1998b, 'What makes a leader?', in *Harvard Business Review*, vol. 76, no. 6, p. 93.
- Goleman, D 2000a, 'Leadership that gets results', in *Harvard Business Review*, vol. 78, no. 2, p. 78.
- Goleman, D 2000b, 'Intelligent leadership', in *Executive Excellence*, vol. 3, p. 17.
- Goleman, D 2001a, 'Emotional intelligence: Issues in paradigm building', in *The emotionally intelligent workplace*, eds C Cherniss & D Goleman, Jossey-Bass, San Francisco, Ch. 2, pp. 13-26.
- Goleman, D 2001b, 'An EI-Based theory of performance', in *The emotionally intelligent workplace. How to select for, measure, and improve emotional intelligence in individuals, groups, & organizations*, C Cherniss & D Goleman, eds, Jossey-Bass, San Francisco, Ch. 3, pp. 27-44.
- Goleman, D 2004, 'Never stop learning'. *Harvard Business Review*, vol. 82, no. 1, p. 28-29.
- Goleman, D 2005, 'Comment on D. Caruso, Defining the inkblot called emotional intelligence', viewed January 2005, *Issues in emotional intelligence*, <<http://www.eiconsortium.org>>.
- Goleman, D, Boyatzis, R & McKee, A 2001, 'Primal leadership: The hidden driver of great performance', *Harvard Business Review*, vol. 79, no. 11, pp. 42-51.
- Goldsmith, M & Morgan, H 2004, 'Leadership is a contact sport', *Strategy + Business*, vol. 36, September, pp. 70-79.
- Gorman, C 2002, 'The science of anxiety. Why do we worry ourselves sick?', *TIME*, June 10, pp. 46-54.

- Gosling, M & Gosling KS, 2004, *Emotional Leadership. Using emotionally intelligent behaviour to enjoy a life of EASE*, Goslings International, Singapore.
- Gowing, MK 2001, 'Measurement of individual emotional competence', in *The emotionally intelligent workplace. How to select for, measure, and improve emotional intelligence in individuals, groups, & organizations*, eds C Cherniss & D Goleman, Jossey-Bass, San Francisco, pp. 83-131.
- Grazebrook, K Garland, A & the Board of BABCP, 2005, 'What are cognitive and/or behavioural psychotherapies?', in *Mapping Psychotherapy – What is CBT?*, British Association for Behavioural and Cognitive Psychotherapies (BABCP), viewed 16 September, 2006 <<http://www.babcp.org.uk/babcp/WhatisCBT-Aug2005.pdf>>.
- Gumm, WB Walker, MK & Day, HD 1982, 'Neurolinguistic programming: Method or myth?', in *Journal of Counselling Psychology*, vol. 29, no. 3, pp. 327-330.
- Halbreich, U & Karkun, S 2006, 'Cross-cultural and social diversity of prevalence of postpartum depression and depressive symptoms', *Journal of Affective Disorders*, vol. 91, pp. 97-111.
- Hang CC 1999, 'Nurturing emotional intelligence in university students', in *Centre for Development of teaching and Learning CDTL Brief*, National University of Singapore, March, vol. 2. no. 1, pp. 6-8.
- Hayes, S 2005, *Acceptance & Commitment Therapy (ACT)*, submitted 1 May, viewed 16 September 2006, <<http://www.contextualpsychology.org/act>>, 3 pages.
- Hay Group, 1999a, 'What makes great leaders. Rethinking the route to effective leadership', *A Hay Executive Briefing*, pp. 1-17.

## References

- Hay Group, 1999b, 'Emotional Competency Inventory (ECI)', viewed April 2005, <[http://www.hayresourcesdirect.haygroup.com/Competency/Assessments\\_Surveys/Emotional\\_Competency\\_Inventory/Overview.asp](http://www.hayresourcesdirect.haygroup.com/Competency/Assessments_Surveys/Emotional_Competency_Inventory/Overview.asp)>.
- Hay Group, Hackman, R & Wageman, R 2001, 'Top teams: Why some work and some do not', Hay Acquisition Company 1, Inc., viewed February, 2005 <[http://www.haygroup.com/library/working\\_papers/Top\\_Teams.asp](http://www.haygroup.com/library/working_papers/Top_Teams.asp)>
- HayGroup, 2005, 'What is emotional intelligence?', viewed 15 February 2005, <[http://ei.haygroup.com/about\\_ei/content\\_index.html](http://ei.haygroup.com/about_ei/content_index.html)>.
- Henley Management College, 2005, 'Research into the assessment and development of Emotional Intelligence', viewed 10 May, 2005 <<http://www.henleymc.ac.uk>>.
- Hepworth, A 2004, 'Business gets on board the EI bandwagon', *The Australian Financial Review*, 31/7/2004-1/8/2004.
- Herkenhoff, L 2004, 'Culturally tuned emotional intelligence: an effective change management tool?', *Strategic Change*, vol. 13, March-April, pp. 73-81.
- Hersey, P & Blanchard, K (1969, 'Life-cycle theory of leadership', *Training and Development Journal*, vol. 23, no. 2, pp. 26-34.
- Higgs, M & Dulewicz V, 1999, *Making Sense of Emotional Intelligence*, NFER Nelson, London.
- Higgs, M & Aitken, P 2003, 'An exploration of the relationship between emotional intelligence and leadership potential', *Journal of Managerial Psychology*, vol. 18, no. 8, pp. 814-823.
- Hofstede, G Van Deusen, CA Mueller CB & Charles, TA 2002, 'What goals do business leaders pursue? A study in fifteen countries', *Journal of International Business Studies*, vol. 33, no. 4, pp. 785-803.
- Hofstede, G & Bond, MH 1988, 'The Confucius connection: From cultural roots to economic growth', *Organizational Dynamics*, vol. 16, no. 4, pp. 5-21.

- Holt, J 1964, 1982, *How children fail*, Pitman Publishing Company, New York.
- House, RJ, Hanges, RJ, Ruiz-Quintanilla, SA, Dorfman, PW, Javidan, M & Dickson, MA 1999, 'Cultural influences on leadership and organizations: Project GLOBE', in *Advances in Global Leadership*, eds WH Mobley, MJ Gessner & V Arnold, JAI Press, Stamford, CT, pp. 171-233.
- Insch, GS, Moore, JE & Murphy, LD 1997, 'Content analysis in leadership research: Examples, procedures, and suggestions for future use', *Leadership Quarterly*, vol. 8, no. 1, pp. 1-25.
- Izard CE 1994, 'Cognition Is One of Four Types of Emotion Activating Systems', in *The Nature of Emotion, Fundamental Questions*, eds P Ekman & RJ Davidson, Oxford University Press, New York. pp. 203-207.
- Johansen, BCP 1990, 'Situational leadership: A review of the research', *Human Resources Development Quarterly*, vol. 1, no. 1, pp. 73-85.
- Jordan, PJ, Ashkanasy, NM & Hartel CE 2002, 'Emotional intelligence as a moderator of emotional and behavioural reactions to job insecurity', *Academy of Management Review*, vol. 27, no. 3, pp. 361-372.
- Kabay, ME 2006, *Computer-Aided Thematic Analysis™: Useful Technique for Analyzing Non-Quantitative Data*, viewed 25 February 2006, <<http://www2.norwich.edu/mkabay/methodology/cata.htm>>.
- Kaplan, HI & Sadock, BJ 1991, *Comprehensive glossary of psychiatry*, Williams & Wilkins, Baltimore.
- Kilburg, RR 1996, 'Toward a conceptual understanding and definition of executive coaching', *Consulting Psychology Journal: Practice and Research*, vol. 48, pp. 134-144.
- Krugman, M, Kirsch, I, Wickless, C, Milling, L, Golicz, H & Toth, A 1985, 'Neuro-Linguistic Programming Treatment for Anxiety: Magic or Myth?' *Journal of Consulting and Clinical Psychology*, vol. 53, no. 4, pp. 526-530.

## References

- Lambert, C 1998, 'The emotional path to success', *Harvard Magazine*, <<http://www.harvard-magazine.com/issues/so98/path.html>>.
- Lazarus, RS 1984, 'On the primacy of cognition', *American Psychologist*, vol. 39, no. 2, pp. 124-129.
- Law, KS, Wong, Chi-Sum, & Song, LJ 2004, 'The construct and criterion validity of emotional intelligence and its potential utility for management studies', *Journal of Applied Psychology*, vol. 89, no. 3, pp. 483-496.
- Ledoux, JE 1994a, 'Cognitive-Emotional Interactions in the Brain', in *The Nature of Emotion, Fundamental Questions*, eds P Ekman & RJ Davidson, Oxford University Press, New York. pp. 216-223.
- Ledoux, JE 1994b, 'The degree of emotional control depends on the kind of response system involved', in Ekman, P & Davidson R J eds *The Nature of Emotion, Fundamental Questions*, Oxford University Press, New York. pp. 270-272.
- Lemann, N 1999, 'The IQ Meritocracy. Our test-obsessed society has Binet and Terman to thank – or to blame', *Time*, Mar 29.
- Leung, SL & Bozionelos, N 2003, 'Five-factor model traits and prototypical image of the effective leader in Confucian culture', *Employee Relations*, vol. 26, no. 1, pp. 62-71.
- Locke, EA 2005, 'Why emotional intelligence is an invalid concept', *Journal of Organizational Behavior*, vol. 26, no. 4, pp. 425-431.
- Lord, RG 1977, 'Functional leadership: Measurement and relation to social power and leadership perceptions', *Administrative Science Quarterly*, vol. 22, pp. 114-133.
- Lucas, E 2000, 'EQ. How do you measure up?', in *Professional Manager*, January, pp. 10-12.

- Maciariello, JA 2006, 'Peter F Drucker on executive leadership and effectiveness', in F Hesselbein & M Goldsmith eds *The leader of the future. Visions, strategies, practices for the new era*, Jossey-Bass, San Francisco, pp. 3-27.
- Mackenzie, RA 1969, 'The management process in 3-D', *Harvard Business Review*, Nov-Dec, pp. 80-87.
- Mann, S 2000, 'Professor of the Spring strategy', *Professional Manager*, May, pp. 20-23.
- Mann, S 2003, 'Standard-bearer', in *Professional manager*, January, pp. 16-19.
- Margo, J 2003, 'Are you high or low on EQ?', *Australian Financial Review*, 10/8/2000.
- Maslow, AH 1954, *Motivation and personality*, Harper, New York.
- Masood, SA Dani, SS Burns, ND & Blackhouse, CJ 2006, 'Transformational leadership and organizational culture; the situational strength perspective', *Proceedings of the Institution of Mechanical Engineers – Part B – Engineering Manufacture*, vol. 220, pp. 941-949.
- Matthews G, Roberts, R D & Zeidner, M 2004. 'Seven Myths About Emotional Intelligence', *Psychological Inquiry*, vol. 15, no. 3, pp. 179-196.
- Matthews G, & Zeidner, M 2000, 'Emotional intelligence, adaptation to stressful encounters, and health outcomes, in *The handbook of emotional intelligence*, eds R Bar-On, & JDA Parker, Jossey-Bass, San Francisco, pp. 459-489.
- Matthews, G, Zeidner, M & Roberts, R D, 2002, *Emotional Intelligence: Science and myth*, MIT Press, Cambridge, Massachusetts.
- Mayer, JD 1998, 'A systems framework for the field of personality', *Psychological Inquiry*, vol. 9, no. 2, pp. 118-144.
- Mayer, JD 1999a, 'Emotional Intelligence: Popular or scientific psychology?', *APA Monitor*, vol. 30, no. 8, p. 50. [*Shared Perspectives* column] American Psychological Association, Washington, DC.

## References

- Mayer, JD 1999b, 'Personality and the search for success' [Book review of Seymour Epstein's *Constructive Thinking: The Key to Emotional Intelligence?*] *Contemporary Psychology: The APA Review of Books*, vol. 44, no. 6, pp. 467-470.
- Mayer, JD 2000a, 'Spiritual intelligence or spiritual consciousness?' *The International Journal for the Psychology of Religion*, vol.10, pp.47-56.
- Mayer, JD 2000b, 'Emotion, intelligence, emotional intelligence', in *The handbook of affect and social cognition*, ed JP Forgas, Lawrence Erlbaum Associates, New Jersey, pp. 410-431.
- Mayer, JD 2001a, 'Primary divisions of personality and their scientific contributions: From the trilogy-of-mind to the systems set', *Journal of the Theory of Social Behaviour*, vol. 31, no. 4, pp. 449-477.
- Mayer, JD 2001b, 'A field guide to emotional intelligence', in *Emotional intelligence in everyday life: A scientific enquiry*, eds J Ciarrochi, JP Forgas & JD Mayer, Psychology Press, New York, pp. 3-24.
- Mayer, JD 2004, 'Be realistic'. *Harvard Business Review*, vol. 82, no. 1, p. 28.
- Mayer, JD 2005, 'Is EI the best predictor of success in life?', *Emotional intelligence information*, viewed 12 April 2005, <[http://www.unh.edu/emotional\\_intelligence/eicontroversy1a.htm](http://www.unh.edu/emotional_intelligence/eicontroversy1a.htm)>.
- Mayer, JD & Beltz, CM 1998, 'Socialization, society's "emotional contract", and emotional intelligence', *Psychological Inquiry*, vol. 9, pp. 300-303.
- Mayer, JD, Caruso, DR & Salovey, P 1999, 'Emotional intelligence meets traditional standards for an intelligence', *Intelligence*, vol. 27, no. 4, pp. 267-298. [Winner of the Mensa Education and Research Foundation and Mensa International, Ltd. 2001 Award for Excellence in Research].
- Mayer, JD, Caruso, DR & Salovey, P 2000, 'Selecting a measure of emotional intelligence: The case for ability scales', in *The handbook of emotional*

- intelligence*, eds R Bar-On, & JDA Parker, Jossey-Bass, San Francisco, pp. 320-342.
- Mayer, JD & Cobb, CD 2000, 'Educational policy on emotional intelligence: Does it make sense?', *Educational Psychology Review*, vol. 12, pp. 163-183.
- Mayer, JD, DiPaolo, MT & Salovey, P 1990, 'Perceiving affective content in ambiguous visual stimuli: A component of emotional intelligence', *Journal of Personality Assessment*, vol. 54, pp. 772-781.
- Mayer, JD & Gaschke YN 1988, 'The experience and meta-experience of mood', *Journal of Personality and Social Psychology*, vol. 55, no. 1, pp. 102-111.
- Mayer, JD & Geher, G 1996, 'Emotional intelligence and the identification of emotion', *Intelligence*, vol. 22, pp. 89-113.
- Mayer, JD & Mitchell, DC 1998, 'Intelligence as a subsystem of personality: From Spearman's *G* to contemporary models of hot-processing', in *Advances in cognition and educational practice*, eds W Tomic & J Kingma, vol. 5: Conceptual issues in research in intelligence, CT: JAI Press, Greenwich, pp. 43-75.
- Mayer, JD, Panter, AT, Salovey, P, Caruso, DR & Sitarenios, G 2005, 'A discrepancy in analyses of the MSCEIT—Resolving the mystery and understanding its implications: A reply to Gignac', *Emotion*, vol. 5, no. 2, pp. 236-237.
- Mayer, JD & Salovey, P 1993, 'The intelligence of emotional intelligence', *Intelligence*, vol. 17, no. 4, pp. 433-442.
- Mayer, JD & Salovey, P 1995, 'Emotional intelligence and the construction and regulation of feelings', *Applied and Preventive Psychology*, vol. 4, pp. 197-208.
- Mayer, JD & Salovey, P 1997, 'What is emotional intelligence?', in *Emotional Development and Emotional Intelligence: Educational Implications*, eds P Salovey & D Sluyter, Basic Books, New York, pp. 3-31.

## References

- Mayer, JD, Salovey, P & Caruso, DR 2000a, 'Models of emotional intelligence', in *Handbook of Intelligence*, ed RJ Sternberg, Cambridge University Press, New York, ch. 18, pp. 396-420.
- Mayer, JD, Salovey, P & Caruso, DR 2000b, 'Emotional intelligence as zeitgeist, as personality, and as mental ability', in *The handbook of emotional intelligence*, eds R Bar-On, & JDA Parker, Jossey-Bass, San Francisco, pp. 92-117.
- Mayer, JD, Salovey, P & Caruso, DR 1999, 2000, 2002a, *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) item booklet/online test items (Version 2.0)*, MHS Publishers, Toronto, Canada.
- Mayer, JD, Salovey, P & Caruso, DR 2002b, *Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) user's manual*, Multi-Health Systems Inc., Toronto, Canada.
- Mayer, JD, Salovey, P & Caruso, DR 2004a, 'Emotional Intelligence: Theory, Findings, and Implications', *Psychological Inquiry*, vol. 15, no. 3, pp. 197-215.
- Mayer, JD, Salovey, P & Caruso, DR 2004b, 'A further consideration of the issues of emotional intelligence', *Psychological Inquiry*, vol. 15, no. 3, pp. 249-255.
- Mayer, JD, Salovey, P, Caruso, DR & Sitarenios, G 2001, 'Emotional intelligence as a standard intelligence', *Emotion*, vol. 1, no. 3, pp. 232-242.
- Mayer, JD, Salovey, P, Caruso, DR & Sitarenios, G 2003, 'Measuring emotional intelligence with the MSCEIT V2.0', *Emotion*, vol. 3, no. 1, pp. 97-105.
- McKay, M & Fanning, P 1995, 2000, *Self-esteem*, 3<sup>rd</sup> edn, New Harbinger Publications, Oakland, CA.
- Meichenbaum, D 1977, *Cognitive-behavior modification*, Plenum, New York.

- Multi-Health Systems Inc (MHS), 2001, Inaugural Conference – 'Applying Emotional Intelligence to Business Solutions and Success', Toronto, Canada, 9-10 August, <<http://www.eiworld.org/emotintbus.htm>>.
- Nader, C 2003, 'EQ begins to edge out IQ' as desirable quality in the boss, *The Sunday Age*, 18/5/2005, p. 10.
- Neuman, WL 1991, *Social research methods. Qualitative and quantitative approaches*, Allyn and CBacom, Boston, MA.
- Nirenberg, J 2003, 'The five myths of leadership', in *Today's Manager*, Singapore Institute of Management, Singapore, Oct-Nov, <[http://www1.sim.edu.sg/sim/pub/mag/sim\\_pub\\_mag\\_list.cfm?ID=1350](http://www1.sim.edu.sg/sim/pub/mag/sim_pub_mag_list.cfm?ID=1350)>.
- O'Keefe, J & Nadel, L 1978, *The Hippocampus as a Cognitive Map*, Oxford University Press, Oxford.
- Palmer, BR 2002, 'Are you emotionally right for the job', *Swinburne News*, Autumn, p. 5.
- Palmer, BR 2003a, 'An analysis of the relationship between various models and measures of emotional intelligence', *Unpublished PhD Thesis*, Swinburne University of Technology, Melbourne.
- Palmer, BR 2003b, *Senior management comparative group report*, Genos Pty Ltd, Melbourne, pp. 1-10.
- Palmer, BR 2003c, *Measuring emotional intelligence in the workplace: Comparative analysis*, Genos Pty Ltd, Melbourne pp.1-2.
- Palmer, BR, Donaldson, C & Stough, C 2002, 'Emotional intelligence and life satisfaction', *Personality & Individual Differences*, vol. 33, no. 7, pp. 1091-1100.
- Palmer, B, Gardner, L & Stough, C 2003a, 'The relationship between emotional intelligence, personality and effective leadership', *Australian Journal of Psychology*, Supplement, vol. 55, p. 140. Paper presented at the 5<sup>th</sup> Australia

## References

- Industrial & Organisational Psychology Conference, Melbourne, June 26-29, pp. 1-9.
- Palmer, B, Gardner, L & Stough, C 2003b, *Measuring emotional intelligence in the workplace with the Swinburne University emotional intelligence test*, published in the Proceedings of the First International Conference on Contemporary Management (ICCM): Emotional intelligence in organisations.
- Palmer, BR, Gignac, G, Manocha, R & Stough, C 2005, 'A psychometric evaluation of the Mayer-Salovey-Caruso Emotional Intelligence Test Version 2.0', *Intelligence*, vol. 33, issue, 3, pp. 285-305.
- Palmer, BR, Manocha, R, Gignac, G & Stough, C 2003, 'Examining the factor structure of the Bar-On emotional quotient inventory with an Australian general population sample', *Personality and Individual Differences*, vol. 35, pp. 1191-1210.
- Palmer, BR & Stough, C, 2001, *Workplace SUEIT: Swinburne University Emotional Intelligence Test – Descriptive Report*, Organisational Psychology Unit, Swinburne University.
- Palmer, BR & Stough, C, 2005, 'Multi-Rater or 360-degree Emotional Intelligence Assessment', *EJOP: Europe's Journal of Psychology*, viewed 4 June 2005, <[http://www.ejop.org/archives/2005/05/multirater\\_or\\_3.html](http://www.ejop.org/archives/2005/05/multirater_or_3.html)>.
- Palmer, B, Walls, M, Burgess, Z & Stough, C 2000, 'Emotional intelligence and effective leadership', *Leadership & Organization Development Journal*, vol. 22, no. 1, pp. 5-10.
- Park, N Peterson, C & Seligman, MEP 2004, 'Strengths of character and well-being', *Journal of Social and Clinical Psychology*, vol. 23, no. 5, pp. 603-619.
- Parolini, JL 2005, *Investigating the relationships among emotional intelligence, servant leadership behaviors and servant leadership culture*, Servant Leadership Research Roundtable, Regent University, August, pp. 1-21,

- viewed 7/3/06 <[http://www.regent.edu/acad/sls/publications/conference\\_proceedings/servant\\_leadership\\_roundtable/2005/pdf/parolini\\_invest.pdf](http://www.regent.edu/acad/sls/publications/conference_proceedings/servant_leadership_roundtable/2005/pdf/parolini_invest.pdf)>.
- Pérez, JC, Petrides, KV & Furnham, A 2005, 'Measuring trait emotional intelligence', in *International Handbook of Emotional Intelligence*, eds R Schulze and R D Roberts, Hogrefe & Huber, Cambridge, MA.
- Petrides, KV, Furnham, A & Frederickson, N 2004, 'Emotional intelligence', *The Psychologist*, Vol. 17, pp. 574-577.
- Power, PG 2004, 'Leadership for tomorrow: Once more, with feeling', *Mt Eliza Business Review*, Summer/Autumn, pp. 43-49.
- Roberts, R, Zeidner, M & Matthews, G 2001, 'Does emotional intelligence meet traditional standards for an intelligence? Some new data and conclusions', *Emotion*, vol. 1, no. 3, pp. 196-231.
- Saarni, C 2000, 'Emotional competence. A development perspective', in *The handbook of emotional intelligence*, eds R Bar-On, & JDA Parker, Jossey-Bass, San Francisco, pp. 68-91.
- Sala, F 2001, 'It's lonely at the top: Executives' emotional intelligence self [mis] perceptions', viewed 30 October 2004, *Issues in emotional intelligence*, <<http://www.eiconsortium.org>>.
- Salovey, P 1999, 'Emotional intelligence', in *Encyclopedia of Human Emotions*, eds D Levinson, JJ Ponzetti Jr, & PF Jorgensen, Macmillan, New York, pp. 229-231.
- Salovey, P, Bedell, BT, Detweiler, JB & Mayer, JD 2000, 'Current directions in emotional intelligence research', in *Handbook of emotions*, 2nd edn, eds M Lewis & JM Haviland-Jones, Guilford Press, New York, pp. 504-520.
- Salovey, P & Mayer, JD 1990, 'Emotional intelligence', *Imagination, Cognition and Personality*, vol. 9, no. 3, pp. 185-211.

## References

- Salovey, P, Mayer, J, Goldman, S, Turvey, C & Palfai, T 1995, 'Emotional attention, clarity and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale', in JW Pennebaker, *Emotion, Disclosure and Health*, American Psychological Association, Washington, DC, pp. 125-154.
- Salovey, P, Woolery, A & Mayer, JD 2001, 'Emotional intelligence: Conceptualization and measurement', in *The Blackwell handbook of social psychology: International processes*, eds G Fletcher & M Clark, Blackwell Publishers, Oxford, England, pp. 279-307.
- Sanfey, AG, Rilling, JK, Aronson, JA, Nystrom, LE & Cohen, JD 2003, 'The neural basis of economic decision-making in the ultimatum game', *Science*, June, pp. 1755-1758.
- Sanfey, AG & Cohen, JD 2004, 'Is knowing always feeling', *PNAS*, viewed 5/3/06, <<http://www.pnas.org/cgi/content/extract/101/48/16709>>.
- Schimmack, U Radhakrishnan, P Oishi, S Dzokoto, V & Ahadi, S 2002, 'Culture, personality, and subjective well-being: Integrating process models of life satisfaction', *Journal of Personality and Social Psychology*, vol. 82, no. 4, pp. 582-593.
- Schutte, NS, Malouff, JM, Hall, LE, Haggerty, DJ, Cooper, JT, Golden, CJ & Dornheim, L 1998, 'Development and validation of a measure of emotional intelligence', *Personality and Individual Differences*, vol. 25, pp. 167-177.
- Schutte, NS, Malouff, JM, Simunek, M, McKenley, J, & Hollander, S, 2002, 'Characteristic emotional intelligence and emotional well-being', *Cognition & Emotion*, vol. 16, no. 6, pp. 769-785.
- Sekaran, U 1984/1992, *Research methods for business: A skill-building approach*, John Wiley & Sons, New York.
- Seligman, MEP 1992, *Learned Optimism*, Pocket Books, New York.
- Seligman, MEP 1995, 'The effectiveness of psychotherapy. The consumer reports study', *American Psychologist*, vol. 50, no. 12, pp. 965-974.

- Seligman, MEP 2002, *Authentic happiness*, Free Press, New York.
- Seligman, MEP & Csikszentmihalyi, M 2000, 'Positive psychology: An introduction', *American Psychologist*, vol. 55, no. 1, pp. 5-14.
- Seligman, MEP Steen, TA Park, N & Peterson, C 2005, 'Positive Psychology progress. Empirical validation of interventions', *American Psychologist*, vol. 60, no. 5, pp. 410-421.
- Sherin J & Caiger, L 2004, 'Rational-emotive behaviour therapy: A behavioural change model for executive coaching', *Consulting Psychology Journal: Practice and Research*, vol. 56, no. 4, pp. 225-233.
- Shipper, F Kincaid, J Rotondo, DM & Hoffman IV, RC 2003, 'A cross-cultural exploratory study of the linkage between emotional intelligence and managerial effectiveness', *The International Journal of Organizational Analysis*, vol. 11, no. 3, pp. 171-191.
- Shweder, R 1994, 'You're not sick, you're just in love: Emotion as an interpretive system', in Ekman, P & Davidson R.J (Eds.) *The Nature of Emotion, Fundamental Questions*, Oxford University Press, New York. pp. 39.
- Stein, SJ & Book, HE, 2000, *The EQ Edge. Emotional intelligence and your success*, Stoddart Publishing, Toronto.
- Swinburne University of Technology 2005, Swinburne Centre for Neuropsychology: Research Units 2005, viewed 11 February 2005, <<http://www.swin.edu.au/bioscieleceng/neuropsych/palmer.htm>> and <<http://www.swin.edu.au/bioscieleceng/neuropsych/eq.htm>>.
- The Straits Times*, 2000, Singapore Press Holdings, Singapore.
- Thomsen-Moore, L 2004, 'Emotional Intelligence – The smart road to management', *Management Today*, September.
- Thorndike, EL 1920, 'Intelligence and its use', *Harper Magazine*, vol. 140, pp. 227-235.

## References

- Thorndike, RL & Stein, S 1937, 'An evaluation of the attempts to measure social intelligence', *Psychological Bulletin*, vol. 34, pp. 275-284.
- Tolman, EC 1948, 'Cognitive maps in rats and men', *Psychological Review*, vol. 55, no. 4, pp. 189-208.
- VanRooy, DL & Viswesvaran, C 2004, 'Emotional Intelligence: A meta-analytic investigation of predictive validity and nomological net', *Journal of Vocational Behaviour*, vol. 65, no. 1, pp. 71-95.
- Voices, 2004, 'Leading by feel', *Harvard Business Review Article*, Reprint R0401B, pp. 1-10.
- Waclawski, J 1999, 'Influence behaviours and managerial effectiveness in lateral relations', in *Human Resource Development Quarterly*, Spring.
- Watzlawick, P 1990, *Münchhausen's pigtail, or psychotherapy and "reality"*, Norton, New York.
- Wechsler, D 1958, *The measurement and appraisal of adult intelligence*, 4<sup>th</sup> ed, Williams & Wilkins, Baltimore.
- Weisinger, H 1998, *Emotional intelligence at work*, Morrow, New York.
- Wessler, RL 1992, 'Constructivism and rational-emotive therapy: A critique', *Psychotherapy*, vol. 29, no. 4, pp. 620-625.
- Winefield, H R & Peay M Y 1980/1991, *Behavioural science in medicine*, 2nd edn, Adelaide, South Australia.
- Zaccaro, SJ Rittman, AL & Marks, MA 2001, 'Team leadership', *The Leadership Quarterly*, vol. 12, pp. 451-483.
- Zajonc, RB 1980, 'Feeling and thinking: Preferences need no inferences', *American Psychologist*, vol. 35, pp. 151-175.
- Zajonc, RB 1984, 'On the primacy of affect', *American Psychologist*, vol. 39, no. 2, pp. 117-123.

- Zeidner, M, Matthews, G, & Roberts, RD 2001, 'Slow Down, You Move Too Fast: Emotional Intelligence Remains an "Elusive" Intelligence', *Emotion*, vol.1, no.3, 2001, pp.265-275.
- Zeidner, M, Matthews, G & Roberts, RD 2004, 'Emotional Intelligence in the Workplace: A Critical Review', *Applied Psychology: an International Review* vol. 53, no. 3, pp. 371-399.
- Zweig, D & Gruman, J 2004, 'The emotional intelligence myth', *HR Professional*, vol. 21, no. 5, p. 46.